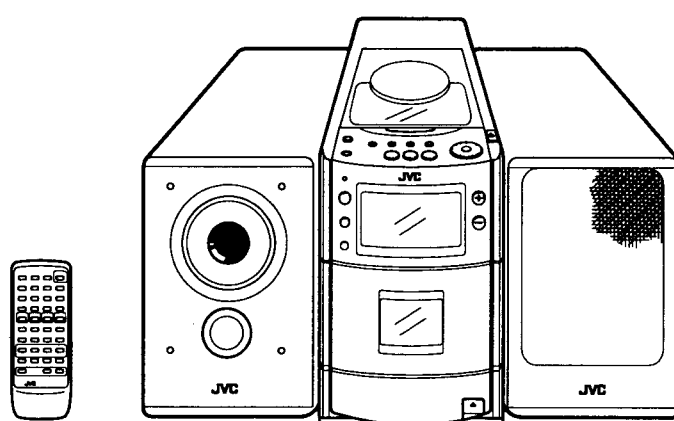


JVC

SERVICE MANUAL

MICRO COMPONENT SYSTEM

UX-T200R GD B/E/EN/G



Area Suffix


B	U.K.
E	Continental Europe
EN	North Europe
G	Germany



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1. Safety Precautions

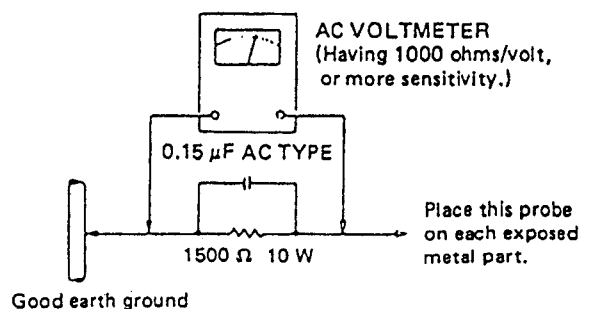
1. The design this product contains special hardware and many circuits and components specially for safety purposes. For continued protection, no changes should be made to the original design unless authorized in writing by the manufacturer. Replacement parts must be identical to those used in the original circuits. Service should be performed by qualified personnel only.
2. Alterations of the design or circuitry of the product should not be made. Any design alterations of the product should not be made. Any design alterations or additions will void the manufacture's warranty and will further relieve the manufacture of responsibility for personal injury or property damage resulting therefrom.
3. Many electrical and mechanical parts in the product have special safety – related characteristics. These characteristics are often not evident from visual inspection nor can the protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in the parts list of service manual. Electrical components having such features are identified by () on the schematic diagram and parts list in the service manual. The use of a substitute replacement which does not have the same safety characteristics as the recommended replacement part shown in the parts list of service manual may create shock, fire, or other hazards.
4. The leads in the products are routed and dressed with ties, clamps , tubings, barriers and the like to be separated from live parts, high temperature parts, mpving parts and or sharp edges for the prevention of electric shock and fire hazard. When service is required, the original lead routing and dress should be observed, and it should be confirmed that they have been returned to normal, after reassembling.
5. Leakage current check (Electrical shock hazard testing)

After re – assembling the product, always perform an isolation check on the exposed metal parts of the product (antenna terminals, knobs, metal cabinet, screw heads, headphone jack, control shafts, etc.) to be sure the product is safe to operate without danger of electrical shock. Do not use a line isolation transformer during this check.

- Plug the AC line cord directly into the AC outlet. using a "Leakage current tester", measure the leakage current from each exposed metal part of the cabinet, particularly any exposed metal part having a return path to the chassis, to a known good earth ground. Any leakage current must not exposeed 0.5mA AC(r.m.s.)

• Alternate check method

Plug the AC line cord directly into the AC outlet. Use an AC voltmeter having 1,000 ohms per volt or more sensitivity in the following manner. Connect a 1,500 ohms 10W resistor paralleled by a 0.15 μ F AC type capacitor between an exposed metal part and a known good earth ground. Measure the AC voltage across the resistor with the AC voltmeter. Move the resistor connection to each exposed metal part, particularly any exposed metal part having a return path to the chassis, and measure the AC voltage across the resistor. Now, reverse the plug in the AC outlet and repeat each measurement. Any voltage measured



Warning

1. This equipment has been designed and manufactured to meet international safety standards.
2. It is the legal responsibility of the repairer to ensure that these safety standards are maintaintaind.
3. Repairs must be made in accordance with the relevant safety standards.
4. It is essential that safety critical components are replaced by approved parts.
5. If mains voltage selector is provided, check setting for local voltage.

CAUTION

Burrs formed during molding may be left over on some parts of the chassis. Therefore, pay attention to such burrs in the case of preforming repair of this system.

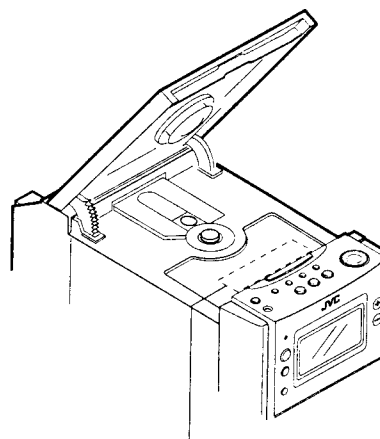
2. Safety Precaution about UX – T200R

IMPORTANT FOR LASER PRODUCTS

PRECAUTIONS

1. CLASS 1 LASER PRODUCT
2. **DANGER:** Invisible laser radiation when open and interlock failed or defeated. Avoid direct exposure to beam.
3. **CAUTION:** Do not open the rear cover. There are no user serviceable parts inside the unit; leave all servicing to qualified service personnel.
4. **CAUTION:** The compact disc player uses invisible laser radiation and is equipped with safety switches which prevent the emission of radiation when the CD holder is open. It is dangerous to defeat the safety switches.
5. **CAUTION:** Use of controls for adjustments and the performance of procedures other than those specified herein may result in exposure to hazardous radiation.
6. **CAUTION:** The laser is able to function, if safety switches out of function. The laser light is invisible, avoid exposure, do not disassemble the laser unit, but replace the complete unit.

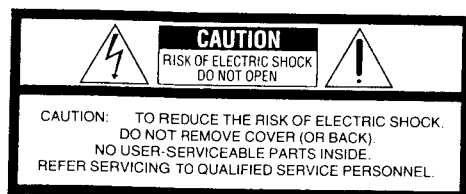
REPRODUCTION OF LABELS AND THEIR LOCATION



DANGER: Invisible laser radiation when open and interlock failed or defeated. AVOID DIRECT EXPOSURE TO BEAM. (e)	ADVARSEL: Usynlig laserstråling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling. (d)	WARNING: Osynlig laserstråling når denne del er åben og spærren er urkopplad. Betrakta ej strålen. (s)	VARO: Avattaessa ja suojalukitus ohitettaessa olet alttiina näkymättömälle lasersäteilylle. Älä katso säteeseen. (f)
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WARNING:

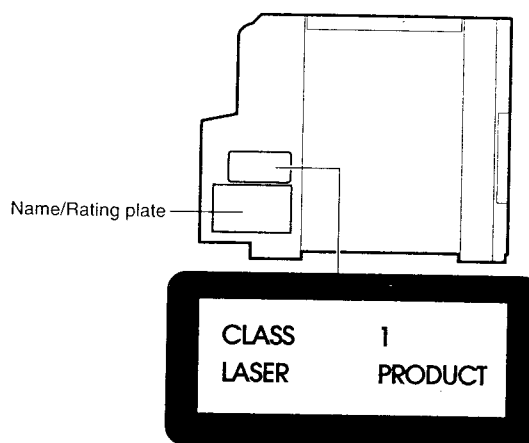
TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in



Caution:
This production contains a laser component of higher laser class than Class 1.

■ Important management points regarding safety (Item demanding special safety precautions)

1. Power transformer marking : VTP66J2-12L

The torque of the screw driver for the power transformer must be controlled.

2. Concerning the AC socket, the next marking must be confirmed and to avoid print circuit board pattern damage.

The AC socket must not float from print circuit board.

• Marking HJC – 027

3. Concerning the primary terminal and the adjacent secondary terminal on the print circuit board to provide proper creeping and spatial distance, solder must not protrude from soldering round.

4. Before installation confirm the fuse capacity indication, (S) and (V) marks on the fuse holder.

REF.NO	Capacity and mark	Indication on P.C.board
F901	T400mA	T400mA
F903	T5A	T5A

5. Following parts are controlled as the heated parts. Confirm that the flammable parts are lifted up ,the parts in () must be control.

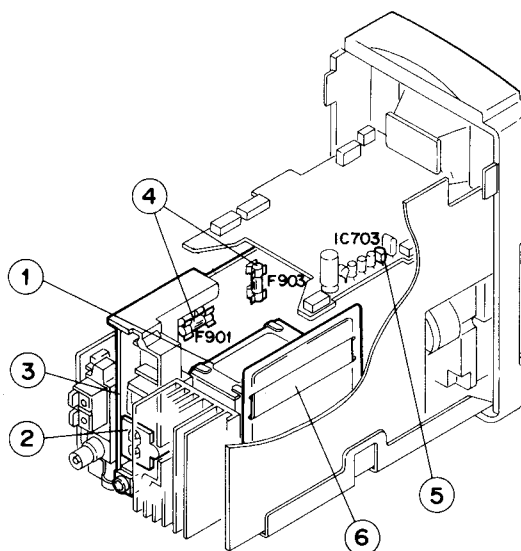
• IC : IC31, (IC703), Transistor : Q9001 , Q9201, Q303, Q304, Q305, Resistor : R9009, R9010, R9011, R9021, R310, R311, R9102, • Diode: D901, D902, D903, D904, D7011 • Radiation

6. The barrier must be attached on the shield of tighten with the transformer.

7. Confirm following EMC (Electromagnetic Compatibility)control matter.

Control parts , and Control work (Symbol number)

TU1 , CF1, CF2, L1, L11, C8 (Tuner board) , C901, C902, C903, C904, L901(Main board)

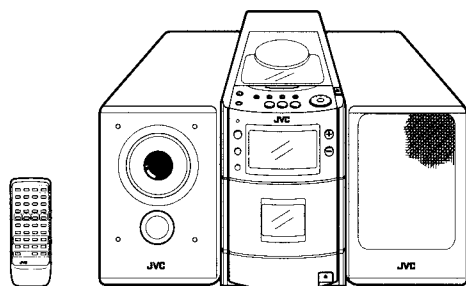


JVC



MICRO COMPONENT SYSTEM

UX-T200R_B



COMPACT disc EON

COMPACT
disc
DIGITAL AUDIO

INSTRUCTIONS

ENGLISH

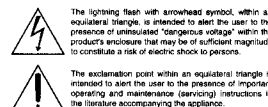
Thank you for purchasing this JVC product. Please read these instructions carefully before starting operation to be sure to obtain optimum performance and a longer service life from the unit.



CONTENTS

Features	3
Safety precautions	3
Handling precautions	4
Connections	5
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Names of parts and their functions	8
Remote control unit	10
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Clock adjustment	22
Timer operations	23
Maintenance	26
Troubleshooting	26
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WARNING:
TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

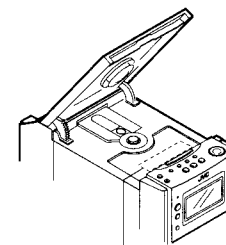


IMPORTANT FOR LASER PRODUCTS

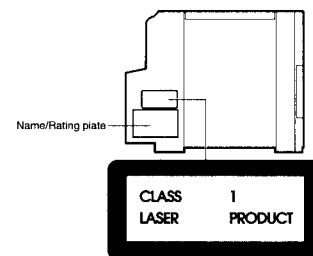
PRECAUTIONS

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4. **CAUTION:** The CD player uses invisible laser radiation and is equipped with safety switches which prevent the emission of radiation when the CD holder or CD tray is open. It is dangerous to defeat the safety switches.
5. **CAUTION:** Use of controls for adjustments and the performance of procedures other than those specified herein may result in exposure to hazardous radiation.

REPRODUCTION OF LABELS AND THEIR LOCATION



DANGER: Invisible laser radiation when open and interlock failed or defeated. AVOID DIRECT EXPOSURE TO BEAM. (D)	ADVARSEL: Udsigt laserstråling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå direkte udsigt for stråling. (D)	VARNING: Udsigt laserstråling når deres dæksel er fjernet. Undgå direkte udsigt for stråling. (D)	VARO: Autsigt laserstråling når dækslet öppnas. Undgå direkt blick för strålen. (D)
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Caution:
This production contains a laser component of higher laser class than Class 1.

3. Instructions

UX - T200RGD B/E/EN/G

**IMPORTANT (in the United Kingdom)
Mains Supply (AC 230 V~, 50 Hz only)**

DO NOT cut off the mains plug from this equipment. If the plug fitted is not suitable for the power points in your home or the cable is too short to reach a power point, then obtain an appropriate safety approved extension lead or consult your dealer.
BE SURE to replace the fuse only with an identical approved type, as originally fitted, and to replace the fuse cover.
If nonetheless the mains plug is cut off ensure to remove the fuse and dispose of the plug immediately, to avoid a possible shock hazard by inadvertent connection to the mains supply.

IMPORTANT

DO NOT make any connection to the terminal which is marked with the letter E or by the safety earth symbol or coloured green or green-and-yellow.
The wires in the mains lead on this product are coloured in accordance with the following code:

Blue to N (Neutral) or Black
Brown to L (Live) or Red

As these colours may not correspond with the coloured markings identifying the terminals in your plug proceed as follows:

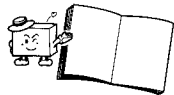
The wire which is coloured blue must be connected to the terminal which is marked with the letter N or coloured black.

The wire which is coloured brown must be connected to the terminal which is marked with the letter L or coloured red.

IF IN DOUBT – CONSULT A COMPETENT ELECTRICIAN.

FEATURES

- CD-size micro component system consisting of 3 units
- Radio data system (RDS)
- Active Hyper-Bass PRO circuit for low-frequency sound reproduction
- One-touch operation (COMPU PLAY)
- 35-key remote control unit operates all CD, cassette deck and tuner functions
- Multi-function CD player
- Programmed play of up to 20 tracks
- Repeat Play
- Random Play
- U-Turn auto-reverse full-logic mechanism
- Auto tape select mechanism
- Metal (type IV) and CrO₂ (type II) tape can be played back for superior tone quality
- CrO₂ (type II) tape recording capability
- 2-band digital synthesizer tuner with 45-station (30 FM and 15 AM (MW/LW)) preset capability
- Seek/manual tuning
- Auto preset tuning
- Timer/Clock function
- Timer on/off with preset volume function
- Sleep timer can be set for up to 120 minutes

SAFETY PRECAUTIONS**Prevention of Electric Shocks, Fire Hazards and Damage**

1. Even when the button is set to STANDBY, a very small current will flow. To save power and for safety when not using the unit for an extended period of time, disconnect the power cord from the household AC outlet.
2. Do not handle the power cord with wet hands.
3. When unplugging from the wall outlet, always grasp and pull the plug, not the power cord.
4. Consult your nearest dealer when damage, disconnection, or contact failure affects the cord.
5. Do not bend the cord severely, or pull or twist it.
6. Do not modify the power cord in any manner.
7. To avoid accidents, do not remove screws to disassemble the unit and do not touch anything inside the unit.
8. Do not insert any metallic objects into the unit.
9. Unplug the power cord when there is a possibility of lightning.
10. If water gets inside the unit, unplug the power cord from the outlet and consult your dealer.
11. Do not block the unit's ventilation holes that allow heat to escape. Do not install the unit in a badly ventilated place.

 button

When the power cord is connected to a household AC outlet, the power indicator lights in red indicating the STANDBY mode. When the button is pressed, the power indicator goes out and the display window lights.

When this unit is plugged into an AC outlet, it consumes a small current to operate the remote control and timer, or to back up the memory of the microprocessor, even when the button is set to STANDBY.

Caution:**Proper Ventilation**

To avoid risk of electric shock and fire, and to prevent damage, locate the apparatus as follows:

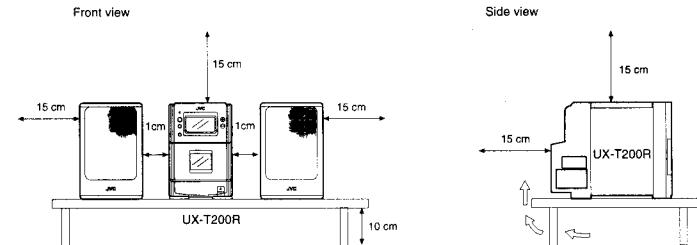
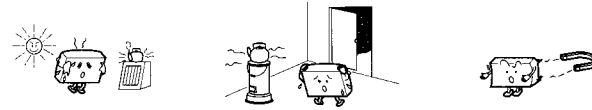
1. Front:
No obstructions and open spacing.

2. Sides/Top/Back:

No obstructions should be placed in the areas shown by the dimensions below.

3. Bottom:

Place on a level surface. Maintain an adequate air path for ventilation by placing on a table with a height of 10 cm or more.

**HANDLING PRECAUTIONS**

Do not use this unit in direct sunlight where it would be exposed to high temperatures above 40°C (104°F).

1. Avoid installing in the following places

- Where it could be subject to vibrations.
- Where it is excessively humid, such as in a bathroom.
- Where it could be magnetized by a magnet or speaker.

2. Pay attention to dust

Be sure to close the CD holder or CD tray so that dust does not collect on the lens.

3. Condensation

- In the following cases, condensation may occur in the unit, in which case the unit may not operate correctly.
- In a room where a heater has just been switched on.
 - In a place where there is smoke or high humidity.
 - When the unit is moved directly from a cold to a warm room.
- In these cases, set the button to STANDBY and wait 1 or 2 hours before use.

4. Volume setting

CDs produce very little noise compared with analog sources. If the volume level is adjusted for these sources, the speakers may be damaged by the sudden increase of output level. Therefore, lower the volume before operation and adjust it as required during play.

5. Safety mechanism

This unit incorporates a safety interlock mechanism which switches the laser beam on and off, so that when the CD holder or CD tray is open, the laser beam stops automatically.

6. Do not place cassette tapes, etc. near the speakers

Since there are magnets in the speakers, do not place tapes or magnetic cards on them as recorded data could be erased.

7. Keep this unit away from your TV

When this unit is used near a TV, the TV picture could be distorted. If this happens, move this unit away from the TV. If this does not correct the situation, avoid using this unit when the TV is turned on.

8. Cleaning the cabinet

If the cabinet gets dirty, wipe it with a soft, dry cloth. Never use benzene or thinner as these could damage the surface finish.

9. When listening with headphones

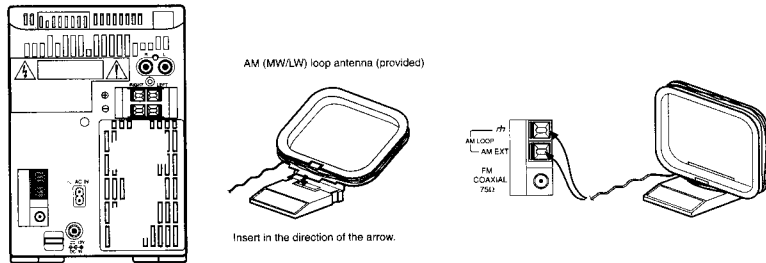
- Do not listen at high volumes as this could damage your hearing.
- For safety, do not drive while listening to this unit.

CONNECTIONS

- Do not switch the power on until all connections are completed.

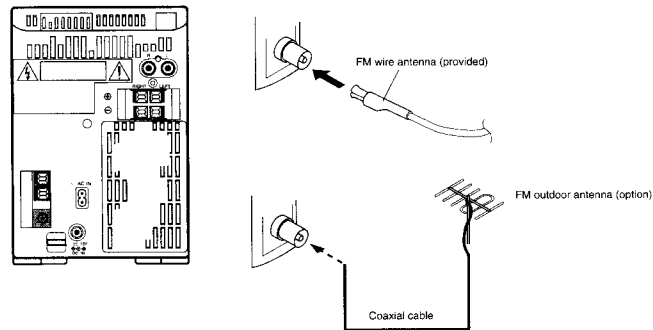
Antenna connection and adjustment

- AM (MW/LW) loop antenna adjustment



- Keep the loop antenna away from the unit and install it so that the best reception is obtained. (Do not leave the antenna wire in a bundle.)

- FM antenna connections and adjustments

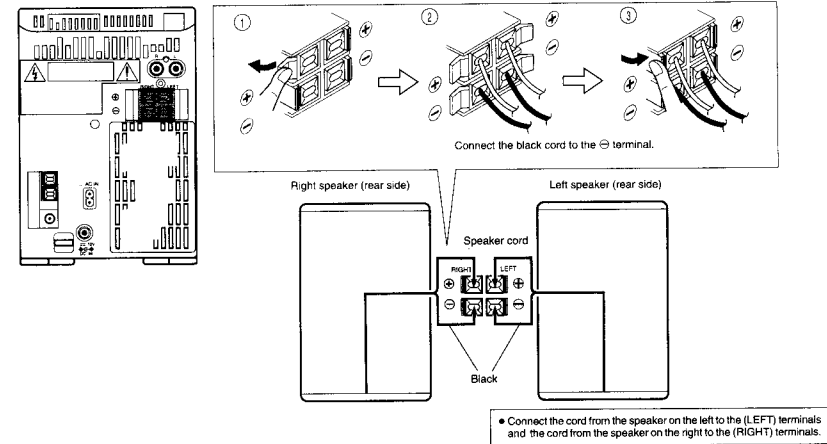


- Use an outdoor antenna when stable reception cannot be obtained with the provided antenna.

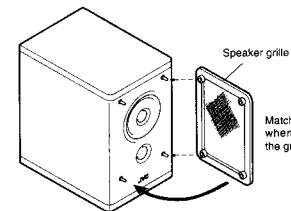
Notes:

- Do not place the loop antenna on a metal desk or near a TV or personal computer.
- Installing an outdoor antenna requires expertise; we recommend that you consult an audio dealer.
- Install the antenna cord away from the power and speaker cords as these could generate noise. Do not install the loop antenna so that it touches the rear of the unit.

Speaker cord connection



- The speaker grilles can be removed.
- When removing
 - Insert your fingers at the top and pull towards you.
 - Also pull the bottom towards you.
- Attaching the speaker grille

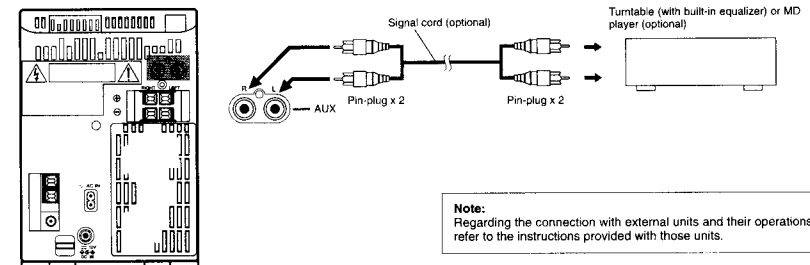


Notes:

- The polarity of the two connected speakers will be the same if the black speaker cords are connected to the ⊖ terminals. If the speakers are connected with polarities reversed, stereo effect and tone will be degraded.
- The speakers of this unit are not magnetically shielded. When they are placed directly on or adjacent to a TV, the TV's picture could be distorted. Install the speakers more than 20 cm away from your TV.
- When connecting the speaker cord make sure that the wire core, not the insulating cover, is connected to the speaker terminal. Otherwise, sound cannot be heard.

Connection of external audio units

- Connection with a turntable (or MD player)

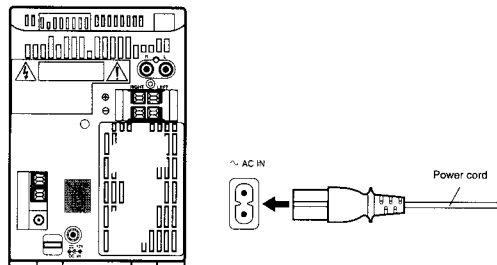


- Note:** Regarding the connection with external units and their operations, refer to the instructions provided with those units.

POWER SUPPLY

A. Connection of AC power cord

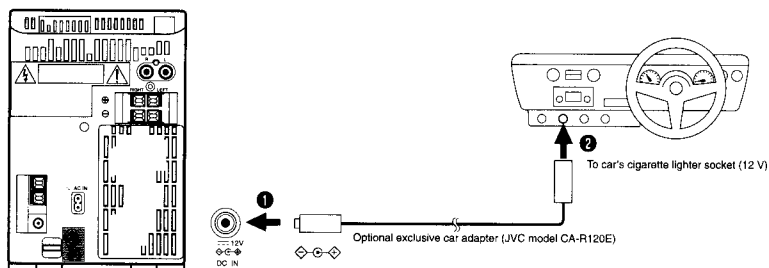
- Connect the AC power cord after all other connections have been made.



CAUTIONS:

1. ONLY USE THE JVC POWER CORD PROVIDED WITH THIS UNIT TO AVOID MALFUNCTION OR DAMAGE TO THE UNIT.
2. BE SURE TO UNPLUG THE POWER CORD FROM THE OUTLET WHEN GOING OUT OR WHEN THE UNIT IS NOT IN USE FOR AN EXTENDED PERIOD OF TIME.

B. Operation on car battery (DC 12 V)



- First connect the car adapter to the DC IN 12 V jack, not the cigarette lighter socket, because shorting of a plug on the car may cause the fuse to blow out. In addition, be careful not to make a short-circuit between the plugs.
- When using a car battery, be sure to use the specified car adapter (JVC model CA-R120E) to prevent mishaps or damage resulting from different polarity design.

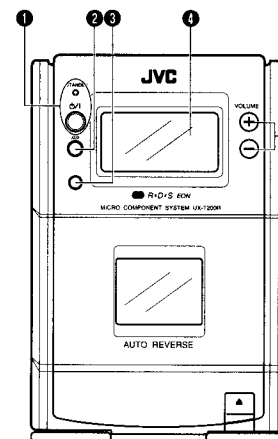
Note:

- When there is a power failure or the AC power cord is disconnected, the timer/clock setting is erased from memory. Reset the clock when the power supply is restored.

NAMES OF PARTS AND THEIR FUNCTIONS

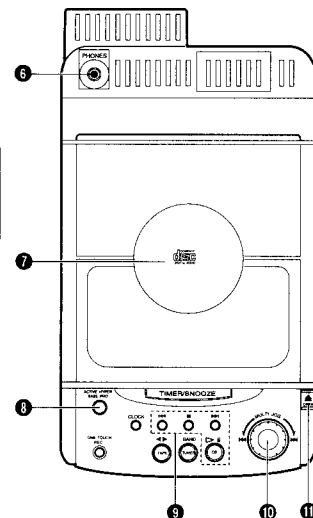
CD player/General section

Front



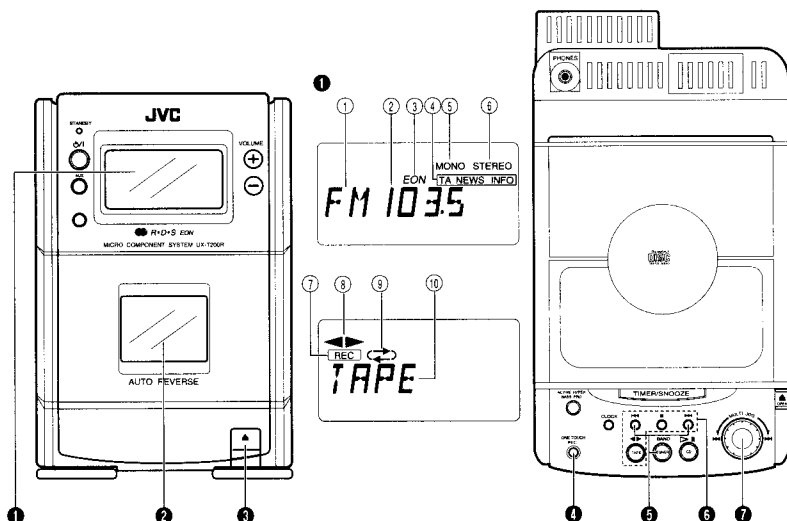
1. Power/Standby button and power STANDBY indicator
2. AUX button
3. Remote sensor section
4. Display window
 1. Function/Track number display
 2. Play time display
 3. Music calendar display
 4. Program mode indicator (PROGRAM)
 5. RANDOM play indicator
 6. Repeat play indicator (ALL)
 7. OVER indicator
5. VOLUME buttons
 - + : Use to increase the volume.
 - : Use to decrease the volume.
 - (Control range from VOL. 0 to VOL. 50.)

Top



8. Headphones jack (PHONES) (3.5 mm dia. stereo mini)
Connect headphones (impedance 16Ω to 1kΩ) to this jack. Speaker sound is automatically switched off when the headphones are connected.
9. CD holder
10. ACTIVE HYPER BASS PRO button
11. CD operations buttons
CD search buttons (◀▶): Press to locate the beginning of a track and to start forward/reverse search operations.
Stop button (■): Press to stop playing a CD.
CD play/pause button (⏮⏭): Press to play a CD or to stop temporarily.
12. MULTI JOG dial
When the function is CD and the dial is turned, the beginning of a track can be searched. (1 track is selected by 2 clicks.)
13. CD holder OPEN (▲) button

Tuner/Deck section



1 Display window

- 1 Band indicator
- 2 Radio frequency display
- 3 EON indicator
- 4 Programme type (TA/NEWS/INFO) indicators
- 5 MONO indicator
- 6 STEREO indicator
- 7 Recording indicator (REC)
- 8 Tape direction indicator (◀▶)
- 9 Reverse mode indicator (⏮/⏭/⏪/⏩)
- 10 Tape (TAPE) mode display
- 11 Cassette holder
- 12 Cassette holder eject (▲) button

13 ONE TOUCH REC button

14 TUNER/BAND button

Press to select tuner mode.

Press to select the band.

Tuning buttons (◀▶):

15 Cassette operation buttons

◀▶: Press to rewind the tape.

■: Press to stop the tape.

▶▶: Press to fast wind the tape.

TAPE (◀▶): Press to select the TAPE mode.

▶: Press to play back the tape in the forward direction.

The ▶ indicator lights in the display window.

◀: Press to play back the tape in the reverse direction.

The ◀ indicator lights in the display window.

16 MULTI JOG dial

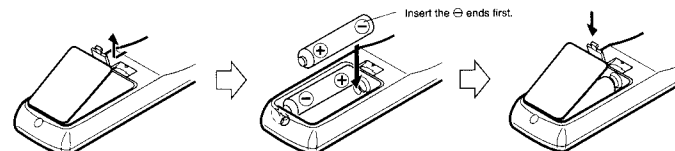
The preset station can be selected. (1 station is selected by 2 clicks.)

REMOTE CONTROL UNIT

Preparation before use

• Installing batteries in the remote control unit

1. Remove the battery cover from the back of the remote control unit.
2. Insert two "R6/AA (15F)" size batteries.
- Insert the batteries with the ⊕ and ⊖ terminals matching the indication inside the battery compartment.
3. Replace the cover.



• Battery replacement

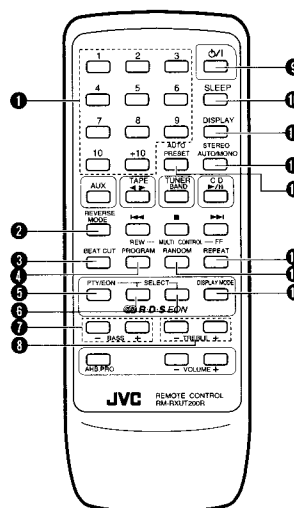
When the remote control operation becomes unstable or the distance from which remote control is possible decreases, replace the batteries.

Using the remote control unit

- Point at the remote sensor and operate within about 7 m (approx. 23 ft).
- The remote control range is less when the unit is used at an angle.
- Do not expose the remote sensor to strong direct sunlight or artificial lighting.
- Make sure that there are no obstacles between the remote sensor and the unit.

The following operations can be performed using the remote control unit.

- Check the operation button functions carefully and operate them correctly.



1 Track number buttons (No. 1 to No. 10, +10)

Press station buttons (No. 1 to No. 10, +10)

2 REVERSE MODE button

⏮: For single-side recording or playback.

⏭: For recording or playback on both sides.

⏪: For continuous play.

3 BEAT CUT button

4 PROGRAM button

5 PTY (Programme Type)/EON (Enhanced Other Networks) button

6 PTY/EON SELECT buttons

6 BASS buttons (+, -)

(Control range from -6 to 6)

6 TREBLE buttons (+, -)

(Control range from -6 to 6)

7 SLEEP button

8 DISPLAY button

Use to display the current time.

9 STEREO AUTO/MONO button

10 AUTO PRESET button

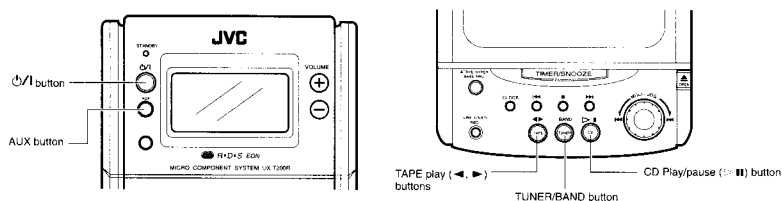
11 REPEAT button

12 RANDOM button

13 DISPLAY MODE button

- Buttons not mentioned here have the same functions as those on the main unit.

SWITCHING THE POWER ON/OFF



Switching the power on/off

Switching on:



The STANDBY indicator goes out.

The indicator in the display window lights.

Switching off:



The STANDBY indicator lights.

The indicator in the display window goes out and only the clock is indicated.

One touch operation (COMPU PLAY)

Even when the power is set to STANDBY, pressing the button shown below switches on the power and selects the source.

	Function mode	Operations
	CD	When this button is pressed with a CD loaded, CD playback begins.
	TAPE	When this button is pressed with a tape loaded, tape playback begins.
	TUNER	When this button is pressed, the tuner is engaged.
	AUX	A sound source connected to the AUX terminal can be engaged.

Notes:

- When switching off the power, be sure to press the button.
- The COMPU PLAY function the remote control has the same function as that on the main unit.

VOLUME, TONE AND OTHER CONTROLS

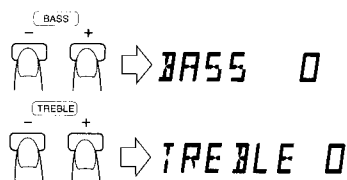
VOLUME buttons

+ : Use to increase the volume.
- : Use to decrease the volume.
(Control range from VOLUME 0 to VOLUME 50)



BASS/TREBLE buttons (using the remote control unit)

To set the bass or treble level, press the corresponding button. The level setting ranges from -6 to 6.



ACTIVE HYPER-BASS PRO button

ON: The BASS indicator lights up. Set to this position to activate ACTIVE HYPER-BASS PRO sound.

OFF: The BASS indicator goes out. Set to this position when ACTIVE HYPER-BASS PRO sound is not required.

HANDLING CDs

Since dirty, damaged and warped CDs may damage the unit, take care regarding the following:

1. Usable CDs

Use CDs with the mark shown.

2. Notes on handling CDs

- Do not touch the reflective recorded surface.
- Do not stick or write anything on the label side.
- Do not bend CDs.

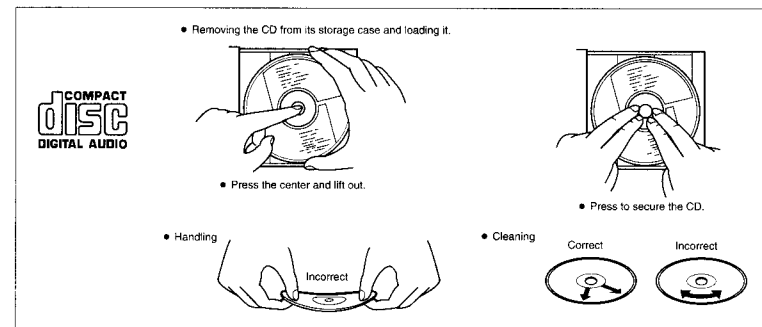
3. Storage

- After removing a CD from the unit, be sure to put it back in its case.
- Do not expose CDs to direct sunlight, high temperatures from a heater, etc., high humidity, or dust.

4. Cleaning CDs

- Before loading a CD, wipe off any dust, dirt or fingerprints with a soft cloth. CDs should be cleaned by wiping radially from the center to the edge.

Never use thinner, benzene, record cleaner or antistatic spray.

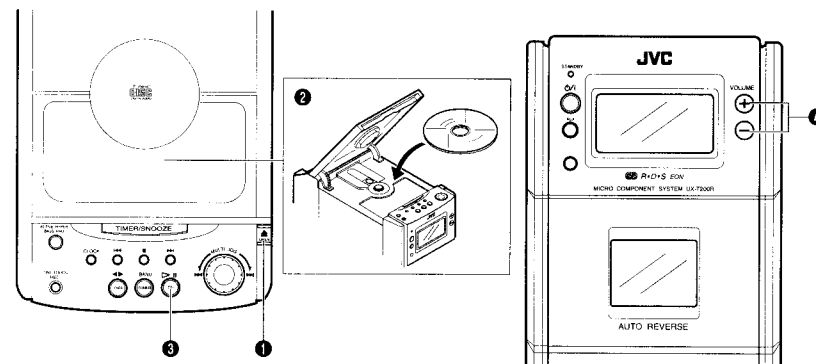


PLAYING CDs

Playing an entire CD

The following example of playing an entire CD assumes a CD with 12 tracks and a total playing time of 48 minutes 57 seconds.

Operate in the order shown




- Press to open the CD holder.
- Load a CD with the label side facing up and close the CD holder.
- Press to start play. (The power is switched on.)
- Adjust.

As tracks are played, their track numbers go out one by one.

8-cm (3") CDs can be used in this unit without an adapter.

● **To stop in the middle of a CD**
During play, press the stop/clear (■) button to stop play.



● The total number of tracks and total playback time are displayed.


● **To stop a CD temporarily**
Press the [⏮] button to stop play temporarily. The playing time display blinks.
When pressed again, play resumes from the point where it was paused.

Caution:

- To change CDs, press the stop/clear (■) button; check that the CD has stopped rotating completely before unloading it.

Notes:

- When no CD is loaded, "NO DISC" is indicated in the display window. This indication may also appear when a CD is loaded upside down.
- The following indication may appear when a CD is dirty or scratched, or when the CD is loaded upside down.
In such a case, check the CD and insert again after cleaning the CD or turning it over.



● Do not use the unit at excessively high or low temperatures. The recommended temperature range is from 5°C (41°F) to 35°C (95°F).

- After play, unload the CD.
- If mistracking occurs during play, lower the volume.

Skip play

- During play, it is possible to skip forward to the beginning of the next track or back to the beginning of the track being played or the previous track; when the beginning of the required track has been located, play starts automatically.

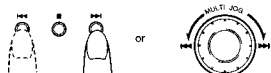
To listen to the next track...

Press the [▶] button once to skip to the beginning of the next track.

To listen to the previous track...

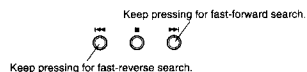
Press the [◀] button to skip to the beginning of the track being played. Press twice quickly to skip to the beginning of the previous track.

- By using the MULTI JOG dial, the beginning of tracks can be searched and played.



Search play (to locate the required position on the CD)

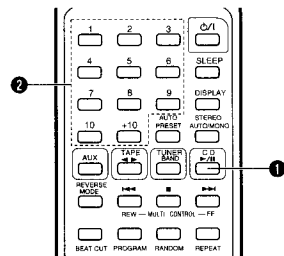
- The required position can be located using fast-forward or reverse search while playing a CD.



- Hold down the button; search play starts slowly and then gradually increases in speed.
- Since low-volume sound (at about one quarter of the normal level) can be heard in the search mode, monitor the sound and release the button when the required position is located.

Direct access play (using the remote control unit)

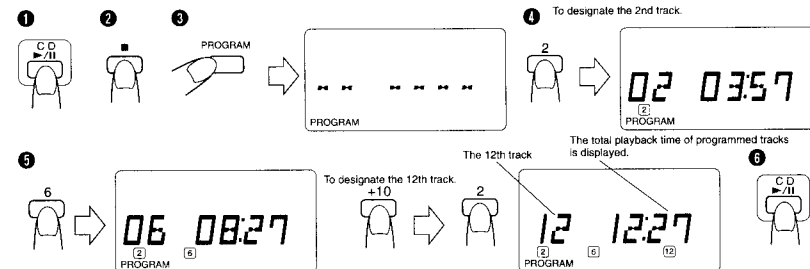
- Pressing any of the track number buttons will start play from the beginning of the designated track. (This function cannot be used during programmed play.)



- 1 Press the CD [▶/II] button to set to the CD mode.
 - 2 Designate the required track using the track number buttons.
 - To designate track numbers 1 to 10, press the track number button corresponding to the track number.
 - To designate track number 11 or higher, press the +10 button the required number of times, then a track number button. (Example: To designate the 20th track, press the +10 button once, then press track number button 10.)
 - +10 button:
Each time this button is pressed, the number increases by 10. First press this button to set the 10's digit, then press the track number button to set the 1's digit.
- **To skip to another track during play**
When the required track number button is pressed, the display shows the designated track number and play starts from the beginning of the designated track.

Programmed play (using the remote control unit)

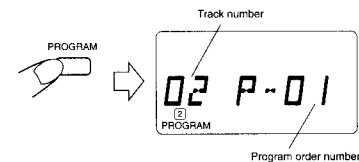
- Up to 20 tracks can be programmed to be played in any required order. The total playing time of programmed tracks is displayed (up to 99 minutes, 59 seconds).
- (Example: When programming the 2nd track to be played first, and the 6th track next, then the 12th track, etc.)



- 1 Press the CD [▶/II] button to set to the CD mode.
- 2 Press the [■] button.
- 3 Press the PROGRAM button to set to the programming mode.
- 4 Press to designate the required track number.
- 5 Designate the remaining tracks by pressing the track number buttons.
- 6 Press the [▶/II] button when programming is completed. Programmed play starts.

To confirm the details of a program...

Press the PROGRAM button; the tracks making up the program will be displayed in programmed order.



To clear the programmed tracks...

Press the [■] button before playing a CD. During programmed play, press this button twice. When the CD holder is opened, programmed tracks are cleared automatically.

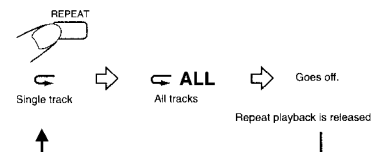
Notes:

- If the total playing time of the programmed tracks exceeds 99 minutes 59 seconds, the total playing time indication will go out.
- When programming a track number higher than 21 on a disc containing more than 21 tracks, the total playback time of all the programmed tracks will not be displayed.
- When a disc with 16 or more tracks is loaded, the "OVER" indicator will appear.

Repeat play (using the remote control unit)

Press the REPEAT button before or during play. A single track or all the tracks can be repeated.

Whether a single track or all tracks are to be repeated can be specified. Each time the REPEAT button is pressed, the mode will change from a single track (◀), to all the tracks (≡ ALL), to the clear mode, in this order.



- **Single track repeat (◀)**
The current or specified track will be played repeatedly.
- **All tracks repeat (≡ ALL)**
All tracks or programmed tracks of a CD will be played repeatedly.

Random play (using the remote control unit)

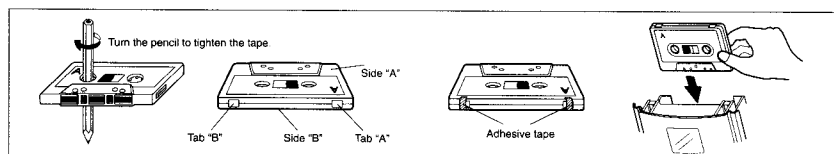
Press the RANDOM button, and all tracks on a CD play once in random order.



HANDLING CASSETTE TAPES

Cassette tapes

- Loose tape may cause trouble. Using a pencil or like object, gently tighten the tape as shown.
- To prevent recordings from being erased accidentally, remove the tab(s) with a screwdriver, etc. Reseal the slots with adhesive tape to erase and re-record after the tabs have been removed.
- C-120 cassettes are not recommended because they are prone to malfunction.



Note:
If the power is switched off while a tape is running, it may be impossible to remove the cassette. If this happens, switch the power on again before attempting to remove the cassette.

Auto tape select mechanism

This unit has an Auto Tape Select mechanism which distinguishes between different types of tape using detection holes in the cassette. After the type of tape has been detected, bias and equalization suitable for the tape are set.

Cassette loading

- Press the eject (▲) button to open the cassette holder.
- Load a cassette as shown.
- Close the cassette holder by pressing it gently. Listen for the click indicating that the holder is securely shut.

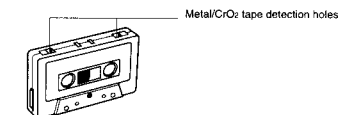
Cassettes with detection holes:

Metal tape (EQ: 70 μ s) Type IV

CrO₂ (chrome) tape (EQ: 70 μ s) Type II

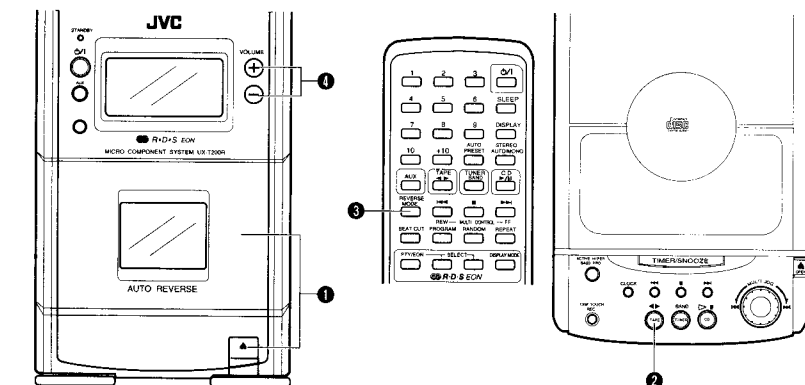
Cassettes without detection holes:

Normal tape (EQ: 120 μ s) Type I



CASSETTE PLAYBACK

Operate in the order shown



- Load a cassette tape.
- Press to start playback. (The power is switched on and the TAPE mode is engaged to start tape playback.)
- Select the reverse mode (◀▶ or ▶▶).
- Adjust.

- After loading a cassette tape, simply press the TAPE ◀▶ button. The power is switched on and the tape starts playback. (To select the playback direction, press the TAPE ◀▶ button. The change in direction can be checked in the tape direction indicator (◀ or ▶).)

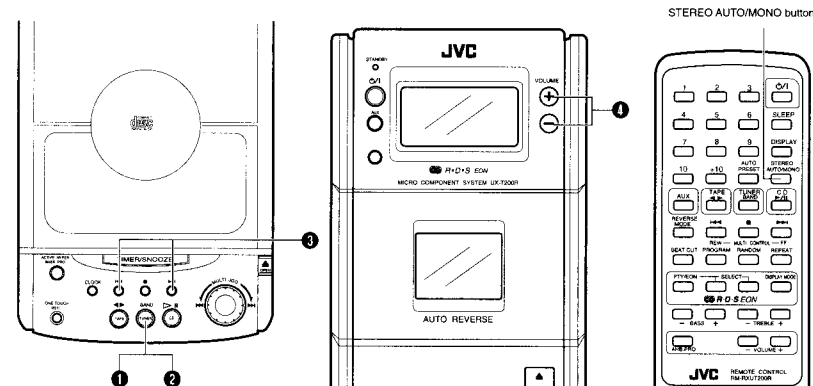
- When the tape plays back with the reverse mode set to ◀▶ (single side play) or ▶▶ (both side play) mode, the tape stops automatically at the end of tape after playing one or both sides. When the reverse mode is set to the ◀▶ (continuous play) mode, the tape continuously plays one side after the other until you stop operation.

How to fast-wind tapes

- Press the TAPE (◀▶) button (to set TAPE mode).
- Press the ◀▶ or ▶▶ button.
 - A tape can be fast-wound in either tape playback direction, and when it reaches the end of a side, it stops automatically.

RADIO RECEPTION

Operate in the order shown



- Press the TUNER/BAND button.
 - The power is switched on and the band and radio frequency will be shown in the display.
- Select the band.
- Tune to the required station.
- Adjust.

STEREO AUTO/MONO button (using the remote control unit)

Auto mode:

Set to this position when listening to or recording an FM stereo broadcast. The STEREO indicator lights when the FM stereo broadcast is received.

MONO:

Set to this position when FM stereo reception is noisy. When another station is tuned to in the MONO mode, the unit automatically enters Auto mode.

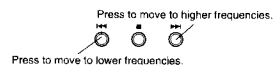
Seek tuning

Press the ◀▶ or ▶▶ button for one second or more. The unit enters the seek tuning mode to tune in the nearest station automatically, so the broadcast can be heard. In AM operation, the frequency moves continuously from the MW to the LW band and vice versa.

Manual tuning

Each time the ◀▶ or ▶▶ button is pressed, the unit steps through the current frequency band. Tuning is done in steps of 50 kHz for FM and 9 kHz for AM (MW/LW).

In AM operation, the tuned frequency moves continuously from the MW (522-1,629 kHz) to the LW (144-288 kHz) band and vice versa.



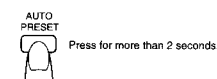
Notes:

- When seek tuning to the required station is not possible because the broadcast signal is too weak, press the ◀▶ or ▶▶ button momentarily to perform manual tuning.
- When the power is set to STANDBY, or another mode (TAPE, CD or AUX) is selected, the last tuned frequency is stored in memory. When the power is switched on again and TUNER/BAND button is pressed, the same station will be tuned to.

Auto preset tuning (using the remote control unit)

This function scans the current band, detecting frequencies used to broadcast signals, and stores the first 30 FM frequencies and 15 AM (MW/LW) frequencies in memory automatically.

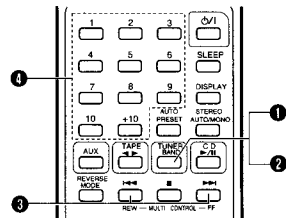
- Press the AUTO PRESET button for more than 2 seconds. The frequencies of stations broadcasting signals can be stored in memory automatically in the order of increasing frequency. (30 stations in FM band and 15 stations in AM (MW/LW) band.)



Presetting stations (using the remote control unit)

30 stations in the FM band and 15 stations in the AM (MW/LW) band can be preset as follows:

- Example: (Presetting an FM station broadcasting at 103.5 MHz to preset button "15")



P-15- FM 103.5

- Press the TUNER/BAND button.
- Select the FM band using the TUNER/BAND button.
- Tune to the required station.
- Press preset button "+10", then "5" for more than 2 sec. (When "15" blinks in the preset station display, the station has been stored.)

- Repeat the above procedure for each of the other stations, using a different preset button each time.
- Repeat the above procedure for the other band.

- To change preset stations**
Perform step ④ above after tuning to the required station.

RDS (Radio Data System)

(Using the remote control unit)

Using the RDS (Radio Data System) to Receive FM Stations

RDS allows FM stations to send additional signals with their regular programme signals. For example, the stations send their station names, and information about what type of programmes they broadcast, such as sports or music, etc.

This unit can receive the following types of RDS signals:

PS (Programme Service): shows commonly known station names.

PTY (Programme Type): shows types of broadcast programmes.

RT (Radio Text): shows text messages the station sends.

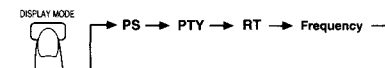
TA (Traffic Announcement): shows traffic announcements being broadcast.

What information can RDS signals provide?

The display shows RDS signal information that the station sends.

To show the RDS signals on the display:

Press the DISPLAY MODE button while listening to an FM station. Each time you press the button, the display changes to show information in the following order:



Notes:

- The previously stored station is erased when a new station is stored, because the new station's frequency replaces the previous frequency in memory.
- When listening to an AM (MW/LW) broadcast, noise may be heard if the remote control unit is used.

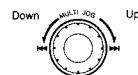
- All preset stations will be erased when the power cord is disconnected or a power failure occurs for more than 24 hours. In such cases, store the stations again.

Preset tuning

- The stations must be preset before this operation can be performed.

Using the main unit

- Press the TUNER/BAND button.
- Select the band using the TUNER/BAND button.
- To select the required preset station, turn the MULTI JOG dial.



Using the remote control unit

- Press the TUNER/BAND button.
 - Select the band using the TUNER/BAND button.
 - Press the required preset station buttons (No. 1 – No. 10 and +10).
- The preset station number and frequency corresponding to the button pressed are shown.

Using the antennas (see page 5)

FM: Connect the provided FM wire antenna.

AM (MW/LW): Adjust the position of AM (MW/LW) loop antenna.

On characters displayed

When the display shows PS, PTY or RT signals:

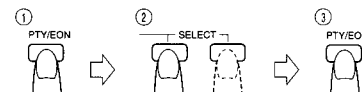
- The display shows upper case letters only.
- The display cannot show accented letters; For example, "A" may represent accented "A's" like "Ä, Å, Ä, Å and Ä".

A	Ä, Å, Ä, Å, Ä, Å, Ä, Å	K	K	U	Ü, Ö, Ü, Ö, Ü, Ö	0	0	W	W	1	1	+	+	>	>
B	B	L	L	V	V	1	1	+	+	+	+	+	+	>	>
C	C, Ç, Ç	M	M	W	W	2	2	--	--	--	--	--	--	=	=
D	D, Ø	N	N, Ñ	X	X	3	3	,	,	,	,	,	,	\	\
E	E, É, É, É, É, É	O	O, Ó, Ó, Ó, Ó, Ó	Y	Y	4	4	,	,	,	,	,	,	'	'
F	F	P	P	Z	Z, Ž, Ž	5	5	/	/	/	/	/	/		
G	G	Q	Q			6	6	--	--	--	--	--	--		
H	H	R	R, Å, Å			7	7	--	--	--	--	--	--		
I	I, Í, Í, Í, Í, Í	S	S, Š, Š			8	8	--	--	--	--	--	--		
J	J	T	T			9	9								

To search for a programme by PTY codes

One of the advantages of the RDS service is that you can locate a particular kind of programme by specifying the PTY codes.

To search for a programme using PTY or TA codes:



- Press the PTY button once while listening to an FM station.**
The display alternates between "PTY" and "SELECT".
- Select the PTY code using the SELECT buttons within 10 seconds.**
Each time you press the button, the display shows a category in the following order:
NEWS ↔ AFFAIRS ↔ INFO ↔ SPORT ↔ EDUCATE ↔ DRAMA ↔ CULTURE ↔ SCIENCE ↔ VARIED ↔ POP M ↔ ROCK M ↔ M.O.R.M ↔ LIGHT M ↔ CLASSICS ↔ OTHER M ↔ TRAFFIC ↔ NEWS
- Press the PTY button within 10 seconds again.**
While searching, the display alternates between "SEARCH" and the selected PTY code.
The unit searches 30 preset stations and stops when it finds a station of the category you have selected, then tunes into that station.

To continue searching after the first stop, press the PTY button again while the display indications blink.
If no programme is found, "NOT FOUND" appears on the display.

To stop searching at any time during the process
Using any tuner operating buttons and controls stops search operation.

Descriptions of the PTY Codes

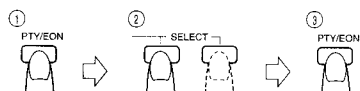
NEWS: News
AFFAIRS: Topical programme expanding on the current news or affairs
INFO: Programmes on medical service, weather forecasts, etc.
SPORT: Sports events
EDUCATE: Educational programmes
DRAMA: Radio plays
CULTURE: Programmes on national or regional culture
SCIENCE: Programmes on natural sciences and technology
VARIED: Other programmes like comedies or ceremonies
POP M: Pop music
ROCK M: Rock music
M.O.R.M: Middle-of-the-road music (usually called "easy listening")
LIGHT M: Light music
CLASSICS: Classical music
OTHER M: Other music
ALARM: Emergency broadcasts

TRAFFIC: Broadcasts which carry traffic announcements
NONE: Undefined (this cannot be searched.)

To temporarily switch to a broadcast programme of your choice EON (Enhanced Other Networks) is another convenient RDS service that allows this unit to switch temporarily to a broadcast programme of your choice (NEWS, TA or INFO) from the currently selected station, except if you are listening to a non-RDS station (all AM (MW/LW) stations or some FM stations).

- If an FM station does not broadcast EON information, EON cannot be activated.

To select a programme type



- Press the EON button twice while listening to an FM station. The display alternates between "EON" and "SELECT".
- Select the programme type with the SELECT buttons within 10 seconds.

The display shows a programme type in the following order:



TA : Traffic Announcement
NEWS : News
INFO : Programmes on medical service, weather forecast, etc.
OFF : EON off

- Press the EON button within 10 seconds again to set the selected programme type. The selected programme type indicator lights up on the display, and the unit enters EON standby mode.

- The EON indicator lights up when tuned to a station which provides EON information.

Case 1: If there is no station broadcasting the type of programme you have selected

The broadcast station being currently heard will continue to be heard.

When a station starts broadcasting the programme you have selected, this unit automatically switches to the station. The programme type (TA, NEWS or INFO) indicator starts blinking.

When the programme is over, this unit goes back to the currently selected station, but still remains in EON standby mode.

Case 2: If there is a station broadcasting the type of programme you have selected

This unit tunes to the station broadcasting the programme. The programme type (TA, NEWS or INFO) indicator starts blinking.

When the programme is over, this unit goes back to the currently selected station, but remains in EON standby mode.

Notes:

- If the EON is in standby mode and the function (CD, TAPE, AUX) switch is changed or the power is switched off, then the EON mode will be released. When the band is set to AM (MW/LW), the EON is not activated. When the band is set to FM again, the EON will be set to standby mode.
- When the EON is being operated (i. e. the selected programme type is being received from the broadcast station) and if the DISPLAY MODE, <◀▶, ▶▶ button or MULTI JOG dial is operated, the station will not switch back to the current selected station even after the programme ends. The programme type indicator remains in the display, indicating that the EON is in standby mode.
- When the EON is in standby mode and a radio broadcast is being recorded, be careful because the EON may be activated and a different programme than the intended one may be recorded. When the EON mode is not required, release the EON mode.
- When the alarm signal is detected by EON, the station broadcasting the alarm is received with priority. "ALARM" is not displayed.

Caution:

When the sound alternates intermittently between the station tuned in by the EON function and the current selected station, cancel the EON mode. This does not constitute malfunction of the unit.

RECORDING



- During recording, the ALC (Automatic Level Control) circuit automatically optimizes the recording level, so manual recording level adjustment is unnecessary.
- Check that the safety tab on the cassette tape is not broken off.

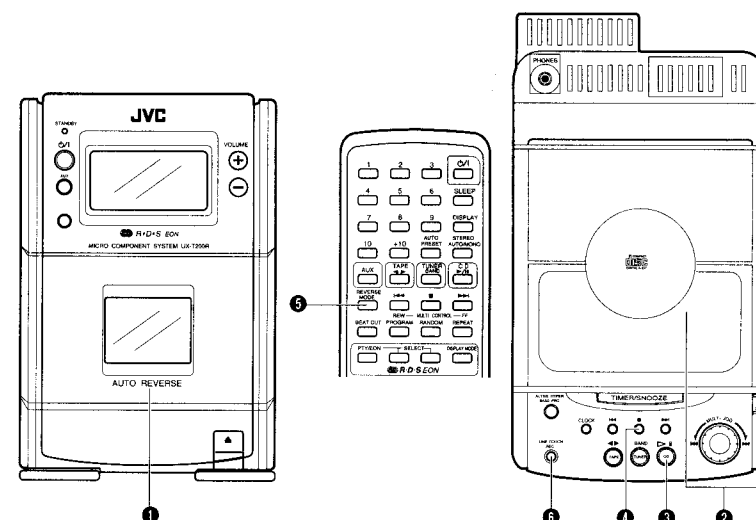
Note:

This unit has recording characteristics suitable for normal and CrO₂ tapes. Normal and CrO₂ tapes have different characteristics from metal tapes.

Synchronized recording with the CD player

- In this system, the CD player starts play when the cassette deck enters the recording mode.

Operate in the order shown



- Load a cassette with side A facing out. (Wind past the tape leader before starting recording.)
- Load a CD and close the CD holder.
- Set to the CD mode.
- Press the button to set stop mode.
- Select the required reverse mode (or).

- When programmed play is required, program the required tracks using the remote control. (See page 14.)
- Select tracks with a total playing time which does not exceed the tape length.

- Press the ONE TOUCH REC button; synchronized recording will start. (The recording indicator lights up.)

Recording starts in the forward direction and CD play starts automatically.

- After the CD player has played the entire CD or programmed tracks, the deck stops automatically.
- Non-recorded sections of approx. 4 seconds are automatically left between tunes.
- To stop recording in the middle, press the button. The cassette deck also stops after 4 seconds.

Note:

- During CD synchro recording, the , SEARCH (<◀▶, ▶▶) buttons and MULTI JOG dial do not function.

When non-recorded section between tunes is not required ...

- Press the button twice. The CD player enters the pause mode.
- Press the ONE TOUCH REC button to start recording.

Note:

- Depending on the CD used, non-recorded sections of different lengths may be left between tunes.

CD complete recording function (Synchro recording mode only)

If the tape is reversed while a CD is being played, recording will be done on the reverse side of the tape as follows:

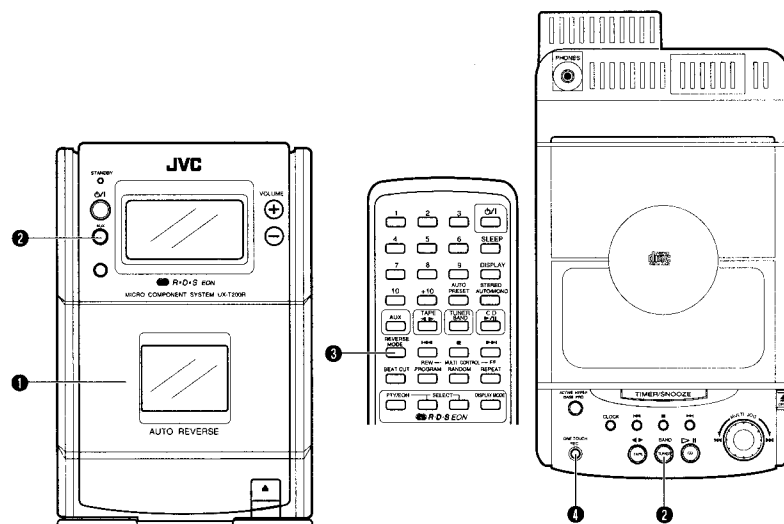
- When less than 12 seconds of the last tune on the forward side of the tape have been recorded, recording on the other side of the tape will start from the beginning of the previous track.
- When more than 12 seconds of the last tune on the forward side of the tape have been recorded, recording on the other side of the tape will start from the beginning of the current track.

To record one track

Play the track to be recorded. Then pressing the ONE TOUCH REC button locates the beginning of the track and enter the one track recording mode. After the recording is finished, the CD player and cassette deck both stop.

Recording from the radio or an external source connected to the AUX terminals

Operate in the order shown



- 1 Load a cassette with side A facing out.
(Wind past the tape leader before starting recording.)
- 2 Select the source to be recorded.
TUNER: Press the TUNER/BAND button. Tune to the required station.
AUX: Press the AUX button.
- 3 Select the required reverse mode (← or →).
- 4 Press the ONE TOUCH REC button.

BEAT CUT button (using the remote control unit)

When recording an AM broadcast, beats may be produced which are not heard when listening to the broadcast. In such case, set this button after setting the deck to the record mode so that the beats are eliminated. Normally set this button to "CUT-1".



CUT-1 → CUT-2 → CUT-3 → CUT-4

Erasing

A recorded tape can be erased by recording new material over the previous material.

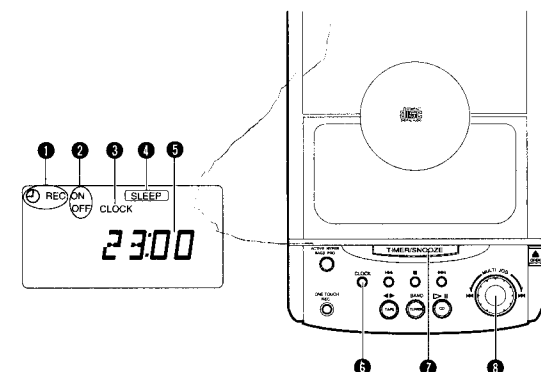
To erase a tape without making a new recording...

1. Press the TAPE (▶▶) button to set to the TAPE mode.
2. Press the ■ button.
3. Insert the cassette with the side to be erased facing out.
4. Press the ONE TOUCH REC button.

It should be noted that it may be unlawful to re-record pre-recorded tapes, records, or discs without the consent of the owner of copyright in the sound or video recording, broadcast or cable programme and in any literary, dramatic, musical, or artistic work embodied therein.

CLOCK ADJUSTMENT

Names of parts in the clock/timer section, and their functions:

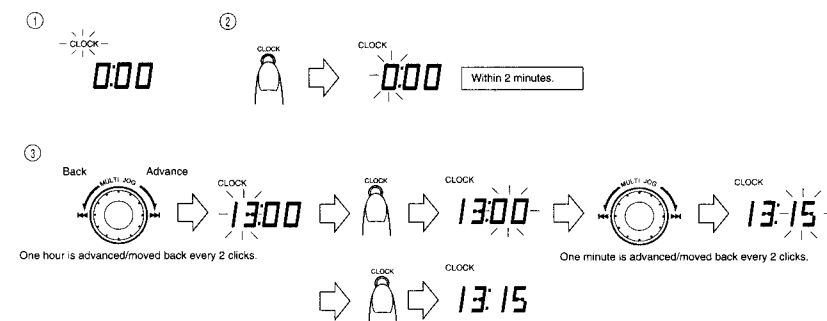


- 1 Timer mode indicator
- 2 Timer indicator (ON/OFF)
- 3 CLOCK indicator
- 4 SLEEP indicator
- 5 Time display

- 6 CLOCK button
 - 7 TIMER/SNOOZE button
 - 8 MULTI JOG dial
- It is used to set the current time and perform timer setting.

Setting the current time (when this unit is used for the first time)

(Example: To set the clock to 13:15.)



- 1 Connect the AC power cord; "CLOCK" will blink in the display.
- 2 Press the CLOCK button for 2 seconds or more.
- 3 Set to 13:15 using the MULTI JOG dial and CLOCK button.

- Setting the current time.
Use the time signal of television and radio broadcasts.
When adjusting the clock, follow steps ② - ③.

Notes:

- Before performing timer recording or playback, it is necessary to set the current time.
- It is recommended to set the current time with the ⏻ button set to STANDBY so that the current display mode is maintained.
- When the power cord is plugged in again after being disconnected or power is restored after a power failure, "CLOCK" will blink in the display. Set the current time again.

TIMER OPERATIONS

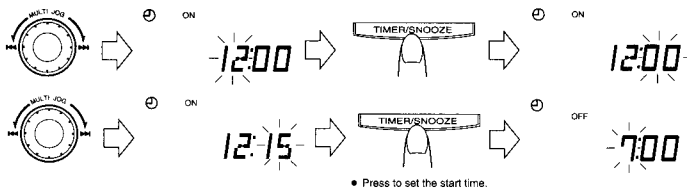
Setting the timer

- The current time must be set before the timer can be used.

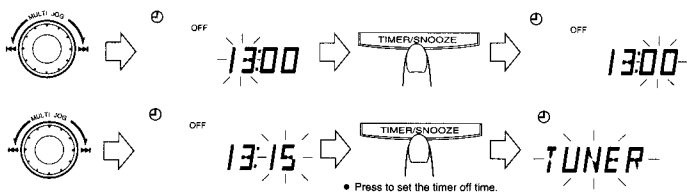
- Press the TIMER/SNOOZE button for 2 seconds or more.



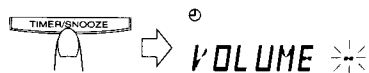
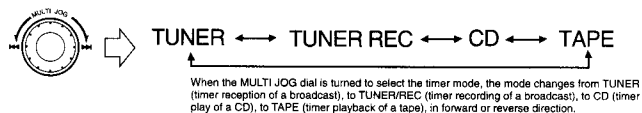
- Set the start time.
(Example: To set the timer to 12:15.)



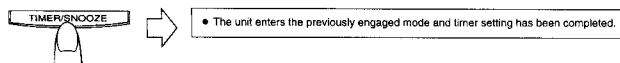
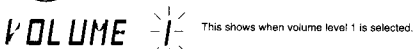
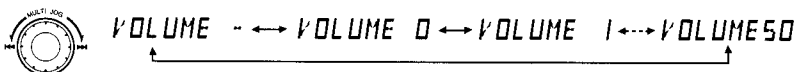
- Set the stop time.
(Example: To set the timer stop timer to 13:15.)



- Select the TIMER mode.
The selected TIMER mode is shown in the display.



- Set the volume.



- The selected volume is set.

- When the volume setting is set to "VOLUME -" (volume level is not specified), the timer playback volume is at the level used before setting the timer.

To confirm the timer setting

- When (Ⓢ) is displayed... Press the TIMER/SNOOZE button for more than 2 seconds. (Ⓢ) disappears.
- Press the TIMER/SNOOZE button for more than 2 seconds once again. Then each time the TIMER/SNOOZE button is pressed, the timer setting can be confirmed. When the previous function mode is restored, showing that the timer setting has been completed.

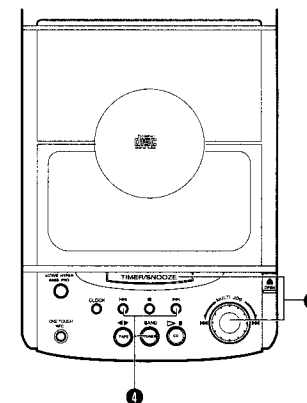
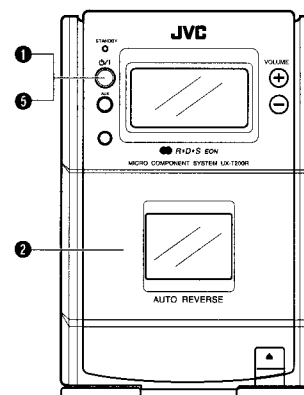
Note:

- When the timer is set incorrectly or the correct mode is not selected, perform "Setting the timer" from the beginning.

Timer recording of broadcast

- The current time must be set before the timer can be used.
- Make sure that the safety tabs of the cassette have not been broken off.

Operations



- Set the C/P button to ON.
- Load a cassette.
Insert the cassette with the side to be recorded facing out.
- Select the required reverse mode. (⏮ or ⏭)
- Set the timer. (Refer to "Setting the timer" on page 23.)
Set the timer about a minute before the broadcast to be recorded is scheduled to start.
- Tune to the station to be recorded. (Refer to page 16.)
- Set the C/P button to STANDBY.

- Timer recording will start at timer start time and the power will be switched off at timer stop time. (The timer mode is then released.)

- To cancel timer operation
Press the TIMER/SNOOZE button for more than 2 seconds so that the timer mode indicator (Ⓢ) goes out.

If you do this, timer recording will not start at the timer start time.

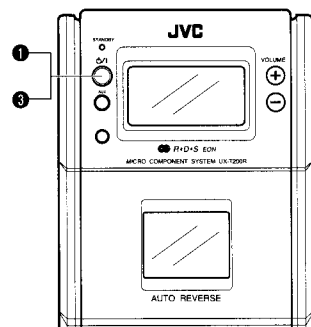
Notes:

- Once the timer has been set, the start and stop times, etc., are stored in memory. When timer recording or playback is required at different times, the timer must be set again.
- After setting the timer start and stop times, check that the tuner is tuned to the required frequency.
- When the power cord is disconnected or there is a power failure, timer settings will be erased from memory. If this happens, set the current time and perform the timer setting again.

Timer playback

- Timer playback of tapes, broadcasts and CDs is possible.

Operations

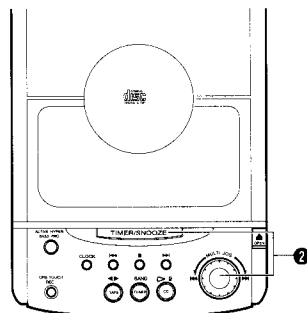


- 1 Set the **STANDBY** button to ON.
- 2 Set the timer. (Refer to "Setting the timer" on page 23.)

Source sound	Timer mode	Operations
CD play	CD	Load a disc.
Tape playback	TAPE	Load a cassette tape.
Broadcast	TUNER	Tune to the required station.

- 3 Set the **STANDBY** button to STANDBY.

- Timer playback will start at the timer start time and the power will be switched off at the timer stop time.
- The unit remains in the same timer mode even after the power is switched off. The same timer function will repeat at the same time on the following day.
- When the power is switched on, it is possible to fade in the sound from volume level 0 (zero) to the preset volume.



- **To cancel timer operation**
Press the **TIMER/SNOOZE** button for more than 2 seconds button so that the timer mode indicator (⌚) goes out.

Notes:

- When the volume setting is set to "VOLUME -" (volume level is not specified), the timer playback volume is set to the level used before setting the timer.
- To stop during timer playback, press the **STANDBY** button to switch the unit off.

To get an extra 5 minutes of sleep...

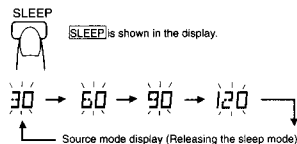
- When timer playback starts, press the **TIMER/SNOOZE** button. The power is switched off and timer playback restarts after 5 minutes (snooze function).



Sleep timer operations (using the remote control unit)

A. Use this when you want to fall asleep while listening to a tape, broadcast or CD.

- 1 Set to the required source and tune (broadcast) or play back (CD or tape).
- 2 Press the **SLEEP** button to set the sleep time.

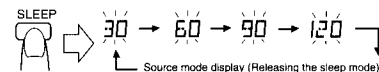


- Sleep time settings of 30, 60, 90 or 120 minutes can be set. When you release the **SLEEP** button, the source is displayed after 5 sec.

- The sleep timer operation will start and the power will be switched off after the specified time.
- **Checking the sleep time**
When the **SLEEP** button is pressed, the remaining sleep time is displayed. If it is pressed again, a new sleep time can be set.
- **To cancel the sleep timer operation**
Press the **STANDBY** button to switch the power off or press the **SLEEP** button until the sleep time indicator disappears.

B. To fall asleep while listening to a tape, broadcast or CD and to perform timer playback the following morning

- 1 Set the timer. (Refer to "Setting the timer" on page 23.)
- 2 Set to the required source (broadcast, tape or CD).
- 3 Press the **SLEEP** button to set the sleep time.



- Any source can be selected for sleep timer operation and timer playback. For example:
• CD play for sleep timer operation and broadcast reception for timer playback.
• Tape playback for sleep timer operation and CD play for timer playback.

However, when broadcast reception is selected for both sleep timer operation and timer playback, the station you heard at night will be tuned to the following morning.

MAINTENANCE



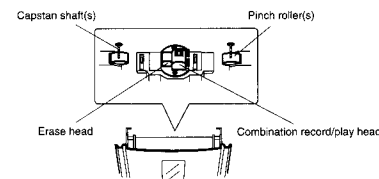
Cleaning is important!

When the tape is running, magnetic powder and dust naturally accumulate on the heads, capstan and pinch roller. When they become too dirty...

- Sound quality deteriorates.
 - The output sound level drops.
 - Previously recorded tape is not completely erased.
 - Recording is not performed satisfactorily.
- Therefore, you should clean the heads, etc. after every 10 hours of use for optimal recording conditions.

Cleaning the heads, capstan and pinch roller

Open the cassette holder.
Clean the heads, pinch roller and capstan.
For effective cleaning, use a cleaning kit available from an audio store.
After cleaning, be sure that the cleaning fluid has dried completely before loading a cassette.

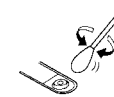
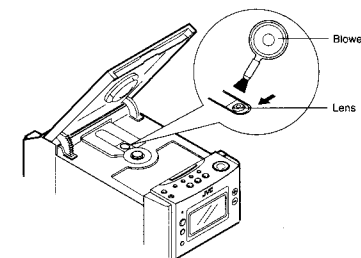


Cautions:

1. Keep magnets and metallic objects away from the head.
If the head becomes magnetized, noise will increase and the sound will deteriorate. Demagnetize the head every 20-30 hours of use with a head eraser (available from an audio store). (When demagnetizing the head, the **STANDBY** button should be set to STANDBY.)
2. Do not use anything other than alcohol for cleaning.
Thinner and benzine will damage the rubber pinch roller.

Cleaning the lens

If the lens in the CD pickup is dirty, dropout, etc., could degrade sound. Open the CD holder and clean the lens as shown.
• Use a blower (available from a camera store) to blow dust off the lens.
• If there are fingerprints, etc. on the lens, gently wipe clean with a cotton swab.



TROUBLESHOOTING



What appears to be trouble is not always serious. First make sure....

- **Power cannot be turned on.**
* Is the power cord unplugged?
- **No sound from the speakers.**
* Are headphones connected?

CD Player Section

- **The CD player does not play.**
* Is the CD upside down?
* Is the CD dirty?
- **A certain portion of the CD does not play correctly.**
* Is the CD scratched?

Cassette Deck Section

- **Playback sound is at a very low level.**
* Is the head dirty?
- **The ONE TOUCH REC button does not function.**
* Have the safety tabs of the cassette been broken off?

Tuner Section

- **Reception is noisy.**
* Try adjusting the antenna.

Timer Section

- **Timer operation does not start.**
* Is the current time set correctly?
* Is the timer mode (⌚) displayed?

Remote Control

- **Remote control is impossible.**
* Are the batteries in the remote control exhausted?
* Is the remote sensor section exposed to bright light (direct sunlight, etc.)?

Note:

Before making an important recording, be sure to make a test recording first to check that the deck, etc. is working correctly.

When the above remedies do not help

Many operations of this unit are performed by the control of a microprocessor. If none of the buttons function, unplug the power cord, wait for a while, then plug it back in. Reset the correct values for the clock and timer.

SPECIFICATIONS

CD player section

Type	: Compact disc player
Signal detection system	: Non-contact optical pickup
Number of channels	: 2 channels
Frequency response	: 20 Hz - 20,000 Hz
Signal-to-noise ratio	: 90 dB
Wow & flutter	: Less than measurable limit

Radio section

Frequency range	: FM 87.5-108 MHz
	: AM (MW) 522-1,629 kHz
	: AM (LW) 144-238 kHz
Antennas	: Loop antenna for AM (MW/LW)
	: External antenna terminal for FM (75 Ω)

Tape deck section

Track system	: 4-track 2-channel stereo
Motor	: Electronic governor DC motor for capstan
Heads	: Hard permalloy head for recording/playback, 2 gap ferrite head for erasure (Combination head)
Frequency response	: 60-15,000 Hz (with CrO ₂ tape)
Wow & flutter	: 0.15% (WRMS)
Fast wind time	: Approx. 130 sec (C-60 cassette)

Speaker Section (each unit)

Speakers	
(Impedance)	: 8 Ω (4 Ω)
Dimensions	: 131 (W) x 203 (H) x 194 (D) mm
Weight	: Approx. 1.6 kg

General

Power output	: 28 W (14 W + 14 W) at 4 Ω (Max.)
	: 20 W (10 W + 10 W) at 4 Ω (10% THD)
Input terminals	: AUX IN (300 mV/47 k Ω)
Output terminals	: PHONES (Output level: 0-15 mW/ch, 32 Ω , Matching impedance: 16 Ω - 1 k Ω)
	: SPEAKER (Matching impedance 4 Ω - 16 Ω)
Power requirements	: AC 230 V, 50 Hz
	: Ext. DC 12V (car battery via optional CA - R120E car adapter)
Power consumption	: 35 W (with ϕ /I button ON)
	: 2.8 W (with ϕ /I button STANDBY)
Dimensions	: 404 (W) x 209 (H) x 270 (D) mm, including knobs
Weight	: Approx. 6.5 kg
Accessories provided	: Power cord x 1
	: Remote control unit (RM-RXUT200R) x 1
	: "R6/AA (15F)" batteries x 2 (for the remote control)
	: FM wire antenna x 1
	: Loop antenna stand x 1

Design and specifications are subject to change without notice.

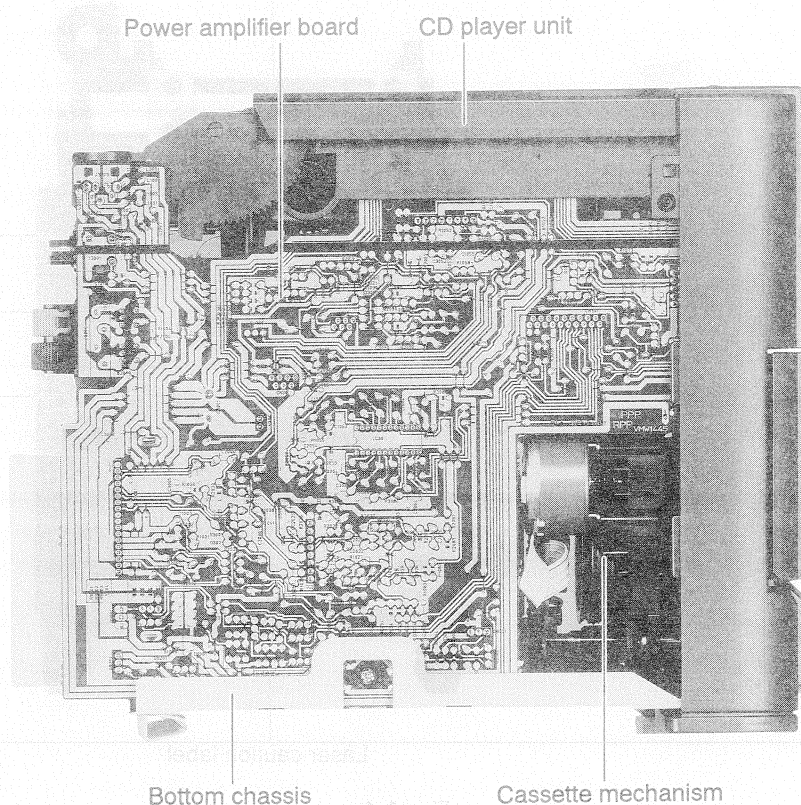
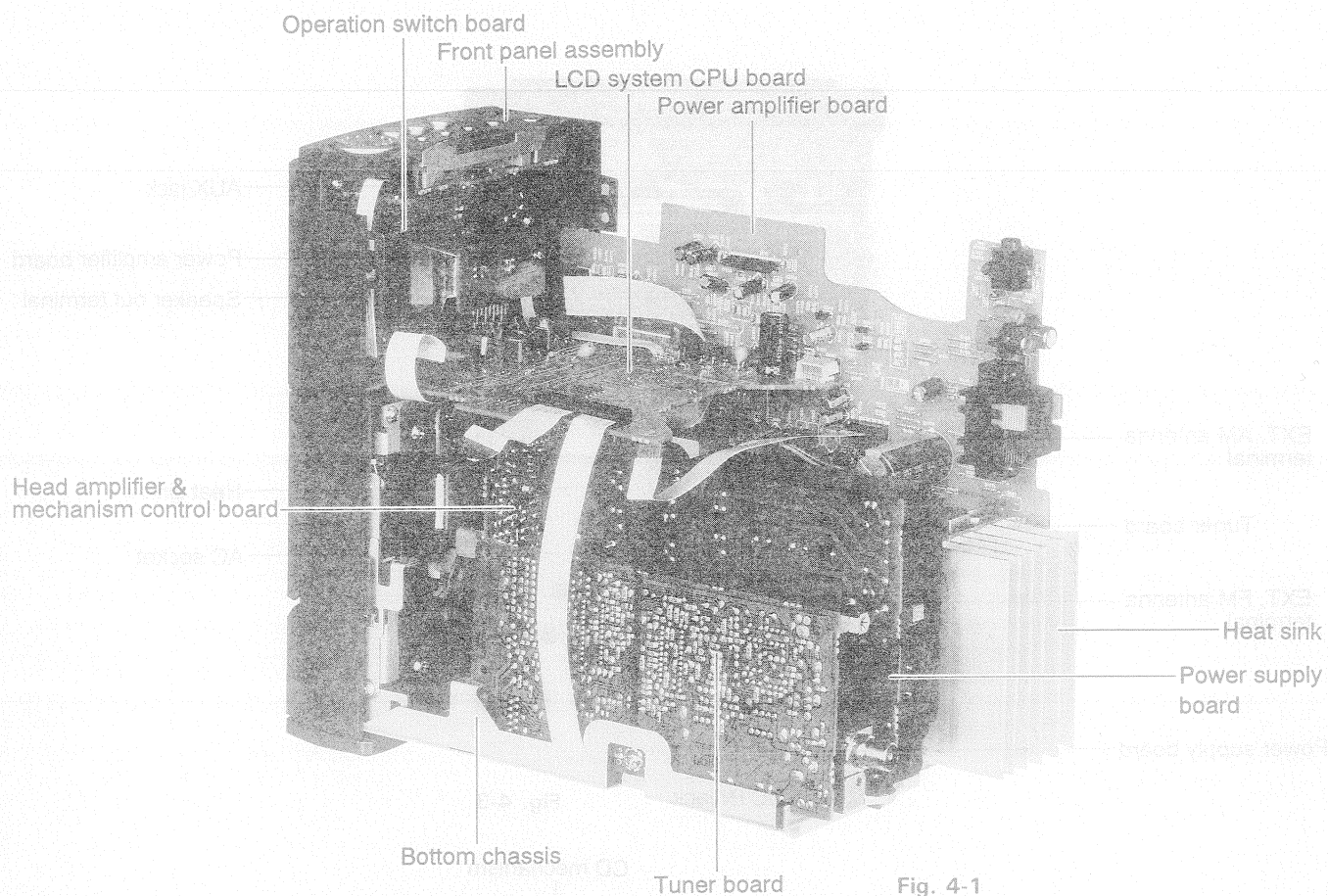


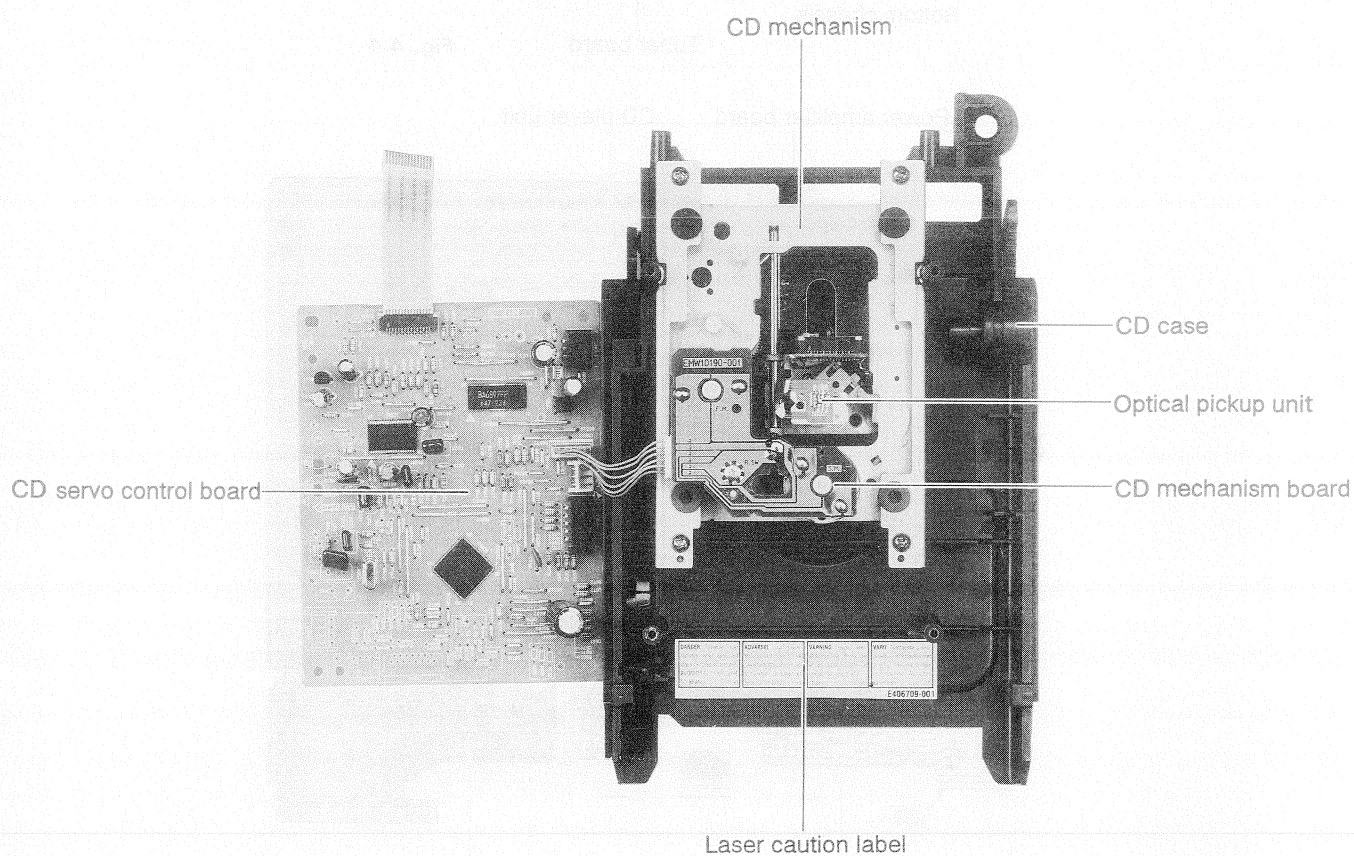
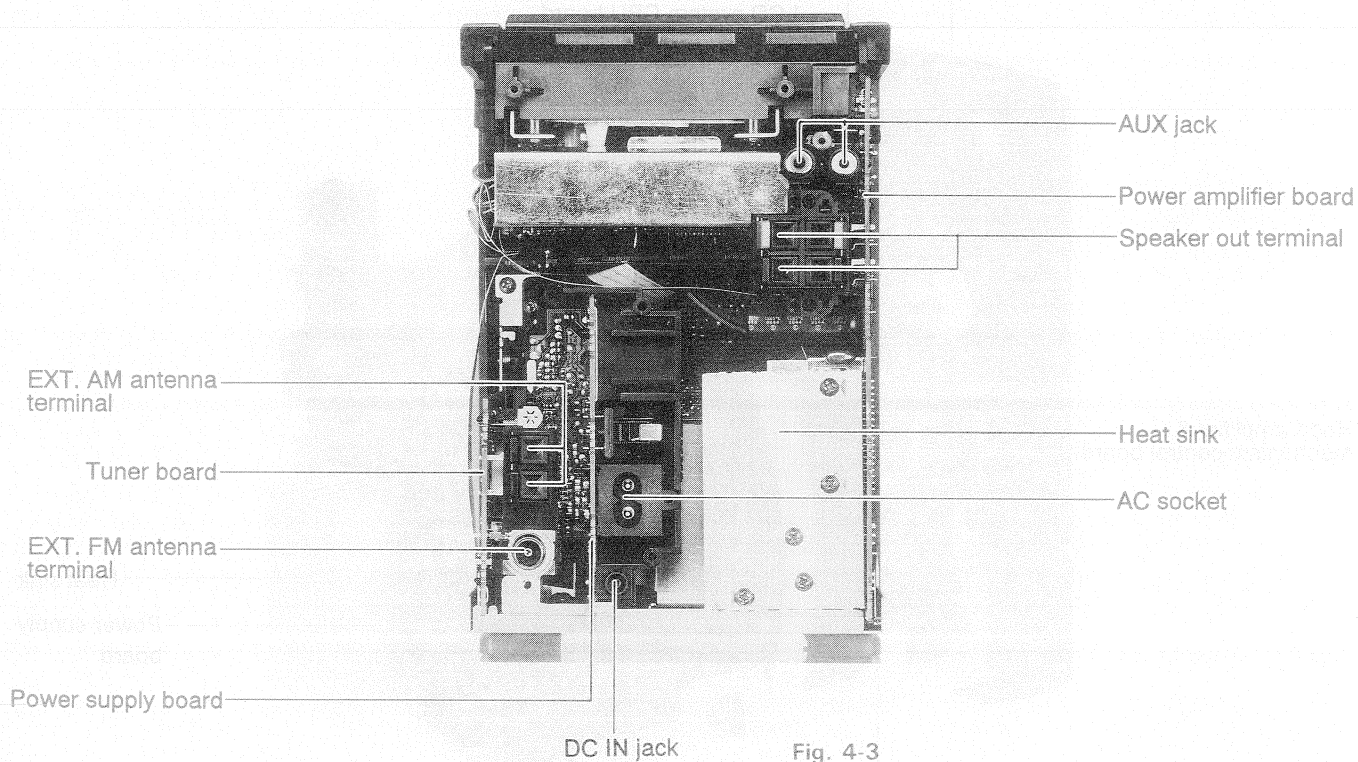
VICTOR COMPANY OF JAPAN, LIMITED

UX-T200R B | MICRO COMPONENT SYSTEM

UX - T200RGD B/E/EN/G

4. Location of Main Parts





5. Removal of Main Parts

■ Removing the rear panel

(See Figs. 5-1 and 5-2)

1. From behind the body, remove the seven screws ① retaining the rear panel (See Fig. 5-1).
2. After turning the body upside down, remove the two screws ② retaining the rear panel (See Fig. 5-2).
3. Take out the rear panel from behind the body.

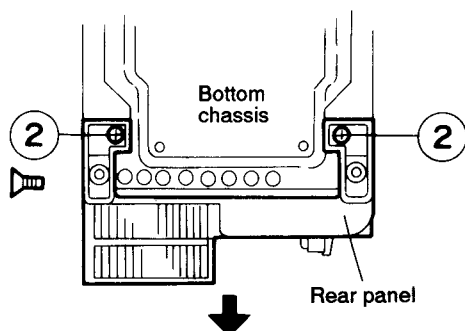


Fig. 5-2

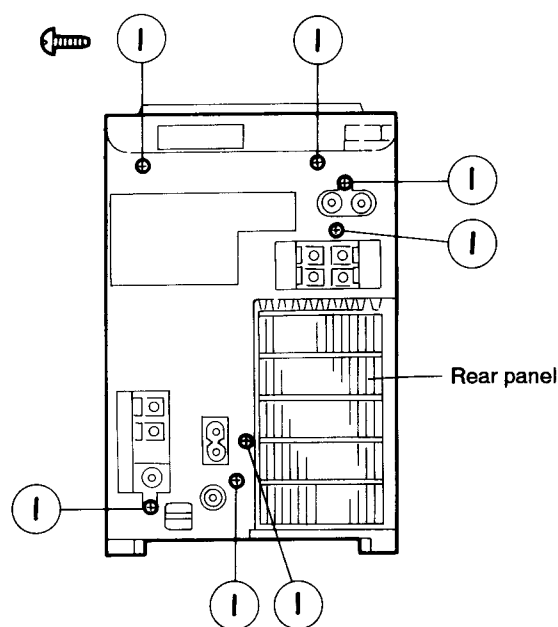


Fig. 5-1

■ Removing the side panels (L and R)

(See Figs. 5-3-5-6)

1. After turning the body upside down, remove the two screws ③ retaining the front cabinet assembly (See Fig. 5-3).
2. After turning the body back to its initial position, open the CD door while pressing the upper [OPEN/CLOSE] button (See Fig. 5-4).
3. While moving the side panel (L) in the arrow direction, remove the panel from the left side of the body (See Fig. 5-5).
4. While moving the side panel (R) in the arrow direction, remove this panel from the right side of the body (See Fig. 5-6).

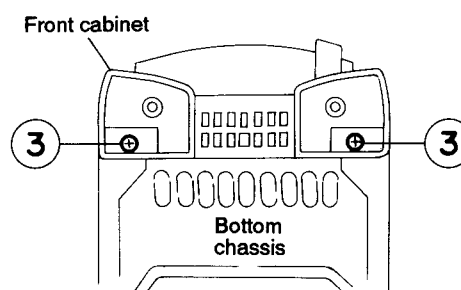


Fig. 5-3

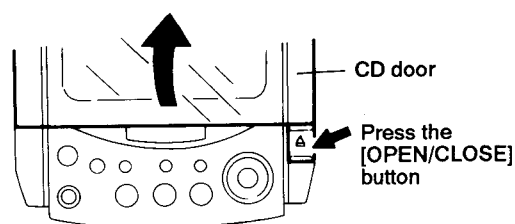


Fig. 5-4

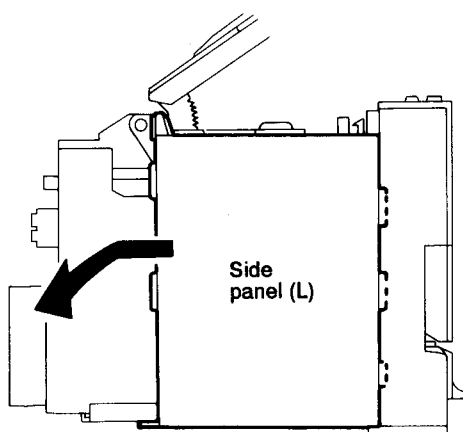


Fig. 5-5

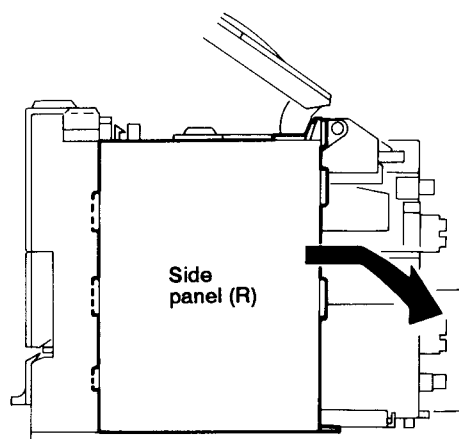


Fig. 5-6

■ Removing the CD player unit

(See Figs. 5-7 and 5-8)

1. Remove the rear panel.
2. Remove the left and right side panels.
3. From the connector CN603 on the CD servo control P. C. board, disconnect the card wire outgoing from the connector CN304 on the power amplifier P. C. board (See Fig. 5-7).
4. Disengage the left and right engagements **a** and **b** fixing the CD player unit by using a minus screw driver, etc. (See Figs. 5-7 and 5-8).

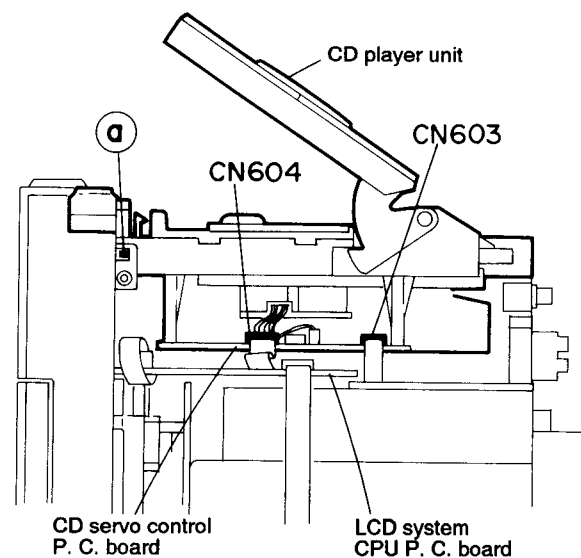


Fig. 5-7

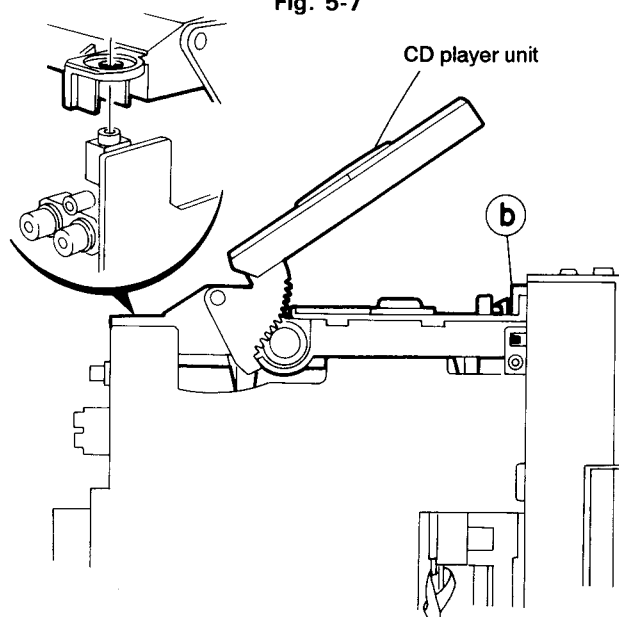


Fig. 5-8

■ Removing the power amplifier P. C. board and heat sink

(See Figs. 5-9 and 5-10)

1. Remove the rear panel.
2. Remove the left and right side panels.
3. Remove the CD player unit.
4. Remove the five screws **4** and **5** retaining the heat sink (See Fig. 5-9).
5. From the connector CN303 on the power amplifier P. C. board, disconnect the card wire outgoing from the connector CN34 on the head amplifier & mechanism control P. C. board (See Fig. 5-9).
6. From the connector CN901 on the power supply board, disconnect the connector wire outgoing from the connector W306 on the power amplifier P. C. board (See Fig. 5-9).
7. Remove the one screw **6** retaining the power amplifier P. C. board (See Fig. 5-10).
8. Remove the power amplifier P. C. board from the two connectors CN711 and CN712 on the LCD system CPU P. C. board (See Fig. 5-9).
9. After removing the power amplifier P. C. board from the key way **c** on the bottom chassis, take this P. C. board out while raising in the arrow direction (See Fig. 5-10).

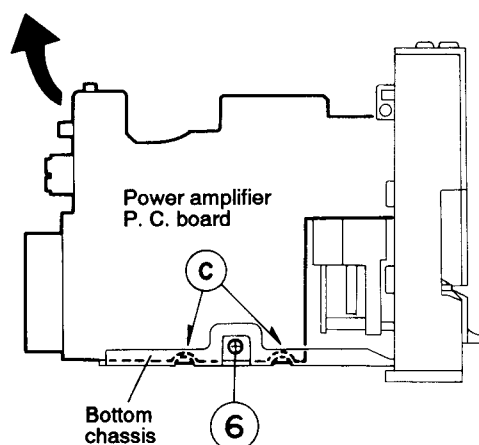


Fig. 5-10

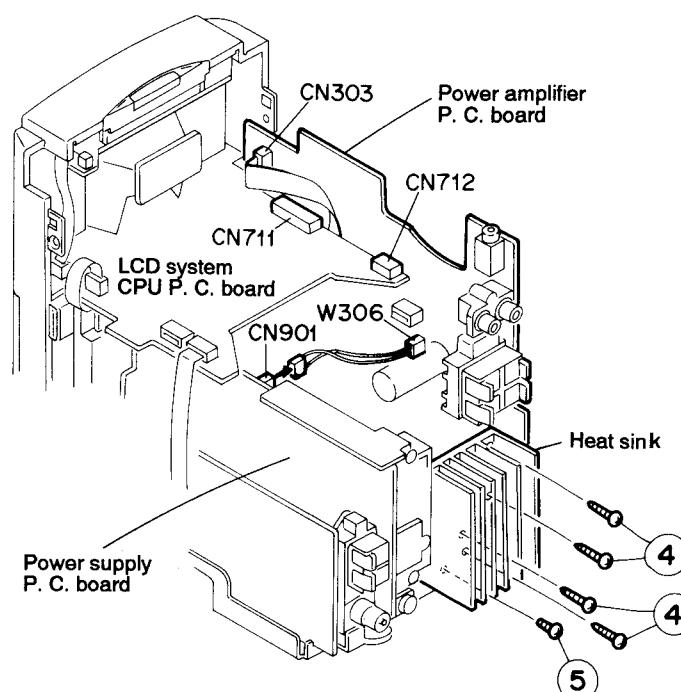


Fig. 5-9

■ Removing the tuner P. C. board (See Fig. 5-11)

1. Remove the rear panel.
2. Remove the left and right side panels.
3. Remove the CD player unit.
4. From the right side of the body, remove the one screw ⑦ retaining the tuner P. C. board.
5. From the connector CN1 on the tuner P. C. board, disconnect the card wire outgoing from the connector CN701 on the LCD system CPU P. C. board.

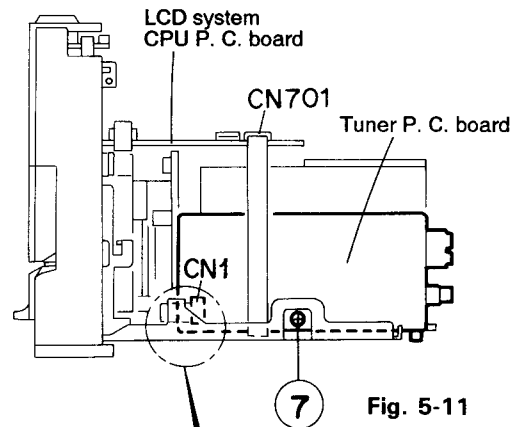


Fig. 5-11

■ Removing the front panel assembly (See Fig. 5-12)

1. Remove the rear panel.
2. Remove the left and right side panels.
3. Remove the CD player unit.
4. Remove the power amplifier assembly.
5. From the bottom of the body, disengage the engagement ④ fixing the front panel assembly in Fig. 5-12 while pressing it with a minus screw driver, etc.

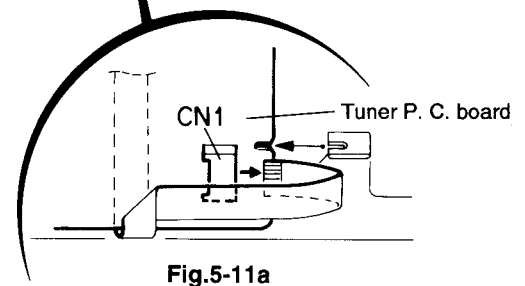


Fig. 5-11a

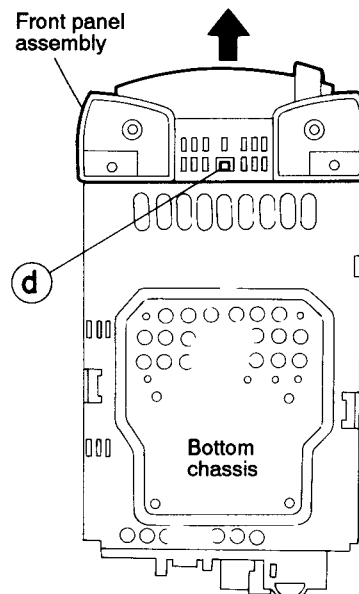


Fig. 5-12

■ Removing the power transformer and power supply P. C. board (See Fig. 5-13)

1. Remove the rear panel.
2. Remove the left and right side panels.
3. Remove the CD player unit.
4. Remove the power amplifier P. C. board and heat sink.
5. Remove the tuner P. C. board.
6. Remove the four screws ⑧ retaining the power transformer and power supply P. C. board and the one screw ⑨ retaining the jack holder.

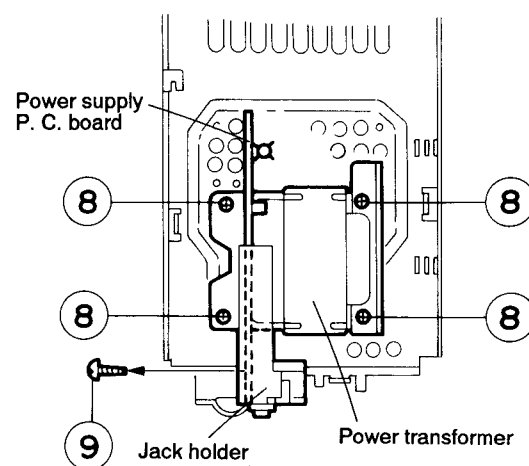


Fig. 5-13

■ Removing the cassette mechanism unit

(See Fig. 5-14)

1. Remove the rear panel.
2. Remove the left and right side panels.
3. Remove the CD player unit.
4. Remove the power amplifier P. C. board.
5. Remove the front panel assembly.
6. From inside the front panel assembly, remove the four screws ⑨ and ⑩ retaining the cassette mechanism unit.
7. From the connector CN33 on the head amplifier & mechanism control P. C. board, disconnect the card wire outgoing from the connector CN 731 on the LCD system CPU P. C. board.

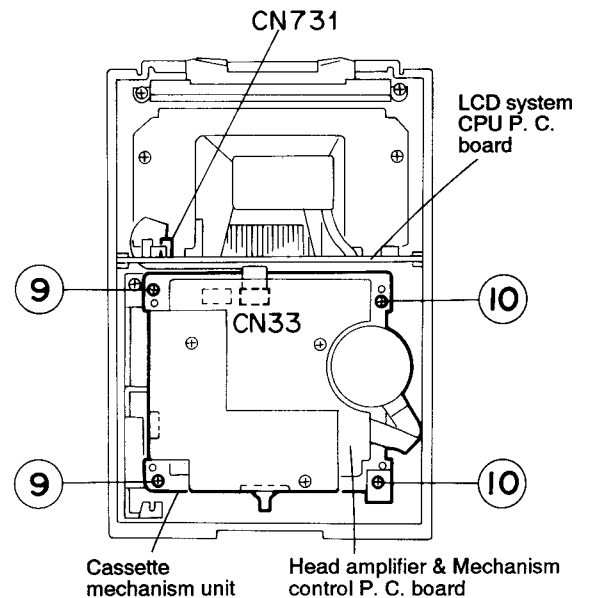


Fig. 5-14

■ Removing the function switch P. C. board and LCD system CPU P. C. board

(See Figs. 5-15 and 5-16)

1. Remove the rear panel.
2. Remove the left and right side panels.
3. Remove the CD player unit.
4. Remove the front panel assembly.
5. Remove the cassette mechanism unit.
6. From inside the front panel assembly, remove the two screws ⑪ retaining the operating switch P. C. board.
7. From the connector CN782 on the LCD system CPU P. C. board, disconnect the connector wire outgoing from the connector CN802 on the operating switch P. C. board.
8. While sliding the two engagements ⑤ fixing the LCD system CPU P. C. board, pull out this P. C. board.
9. After disconnecting the connector CN801 on the function switch P. C. board from the connector CN781 on the LCD system CPU P. C. board, remove the respective P. C. boards while pulling them upward.

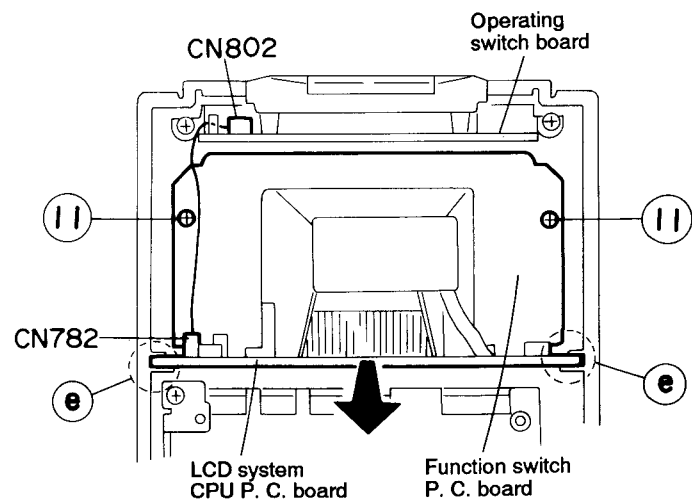


Fig. 5-15

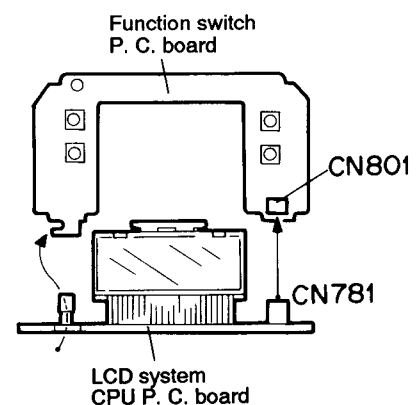


Fig. 5-16

■ Removing the operating switch P. C. board

(See Figs. 5-17 and 5-18)

1. Remove the rear panel.
2. Remove the left and right side panels.
3. Remove the CD player unit.
4. Remove the front panel assembly.
5. Remove the cassette mechanism unit.
6. Remove the front panel assembly.
7. Remove the LCD system CPU P. C. board.
8. Remove the two screws ⑫ retaining the operating switch P. C. board.
9. Remove the [MULTI-JOG] button.
10. Remove the [VOLUME] and [POWER/AUX] buttons.
11. Take out the standby LED lens.
12. After removing the four pawls ① fixing the operating switch P. C. board, remove the switch while pulling it in the arrow direction.
13. Remove the two screws ⑬ retaining the operating switch P. C. board.
14. Remove the six pawls ⑨ fixing the operating switch P. C. board.

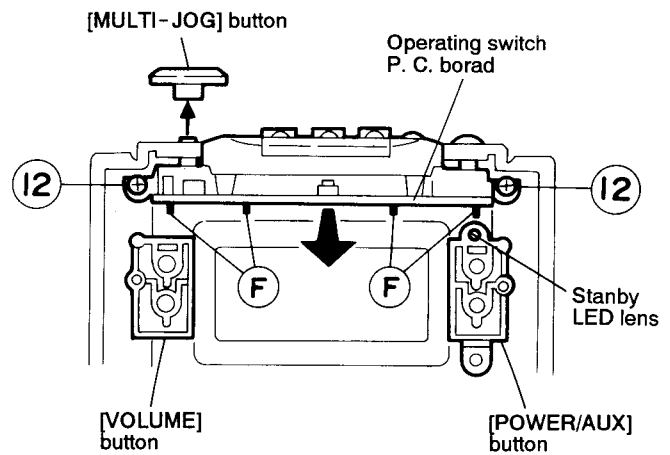


Fig. 5-17

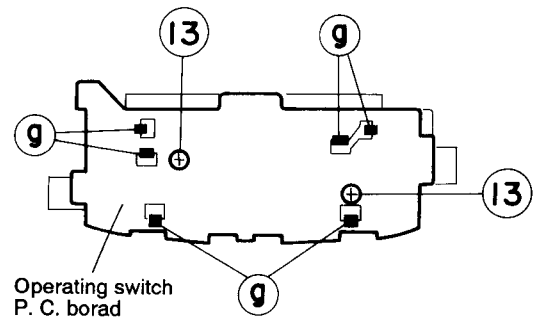


Fig. 5-18

《 Cassette Mechanism Section 》

■ Removing the Playback/Recording & Eraser Head

1. While shifting the trigger arms seen on the right side of the head mount in the arrow direction, turn the flywheel R in counterclockwise direction until the head mount has gone out with a click (See Fig. 5-19).
2. When the flywheel R is rotated in counterclockwise direction, the playback/Recording & eraser head will be turned in counterclockwise direction from the position in Fig. 5-20 to that in Fig. 5-21.
3. At this position, disconnect the flexible P.C. board (outgoing from the playback/Recording & eraser head) from the connector CN31 on the head amplifier & mechanism control P.C. board.
4. After dismounting the FPC holder, remove the flexible P.C. board.
5. Remove the flexible P.C. board from the chassis base.
6. Remove the spring ① from behind the playback/Recording & eraser head.
7. Loosen the reversing azimuth screw retaining the playback/Recording & eraser head.
8. Take out the playback/Recording & eraser head from the front of the head mount.
9. The Playback/Recording & eraser head should also be removed similarly according to Steps 1~8 above.

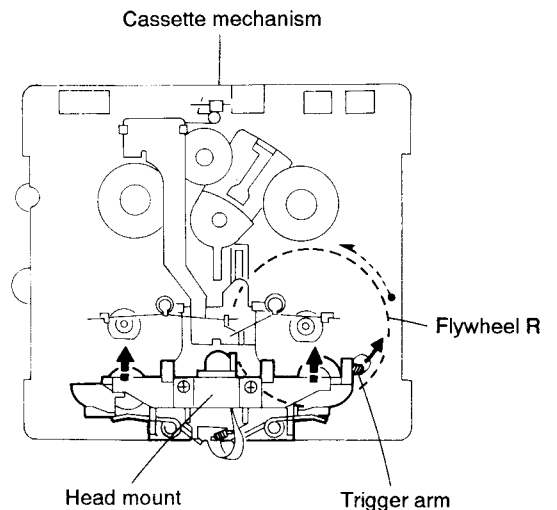


Fig. 5-19

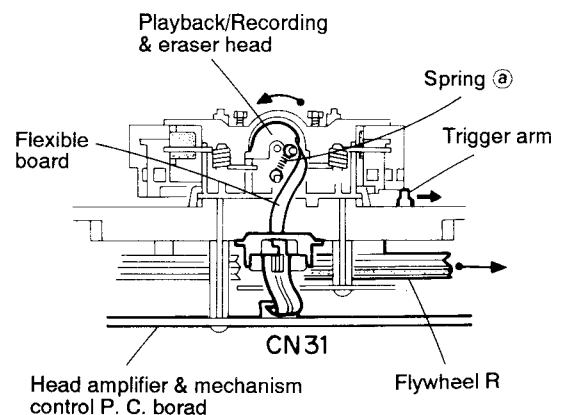


Fig. 5-20

● Reassembling the Playback/Recording & Eraser Head

1. Reassemble the playback head from the front of the head mount to the position as shown in Fig. 5-21.
2. Fix the reversing azimuth screw.
3. Set the spring ① from behind the playback/Recording & eraser head.
4. Attach the flexible P.C. board to the chassis base, and fix it with the FPC holder as shown in Fig. 5-21.
5. The Playback/Recording & eraser head should also be reassembled similarly according to Steps 1~4 above.

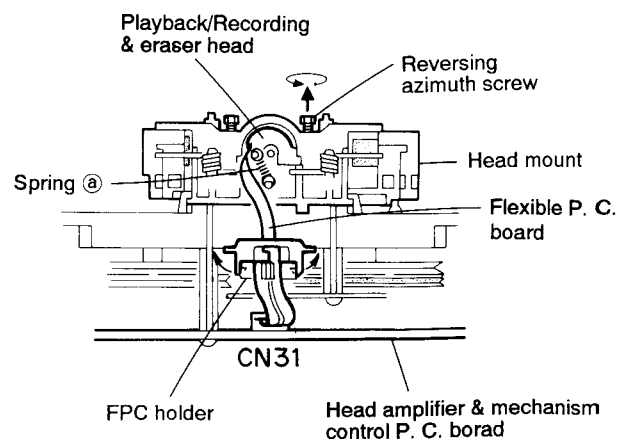


Fig. 5-21

■ Removing the Head Amplifier & Mechanism Control P.C. Board (See Fig. 5-22)

1. Remove the cassette mechanism assembly.
2. After turning over the cassette mechanism assembly, remove the three screws ① retaining the head amplifier & mechanism control P.C. board.
3. Disconnect the connector CN32 on the P.C. board including the connector CN1 on the reel pulse P.C. board.
4. When necessary, remove the 4pin parallel wire soldered to the main motor.

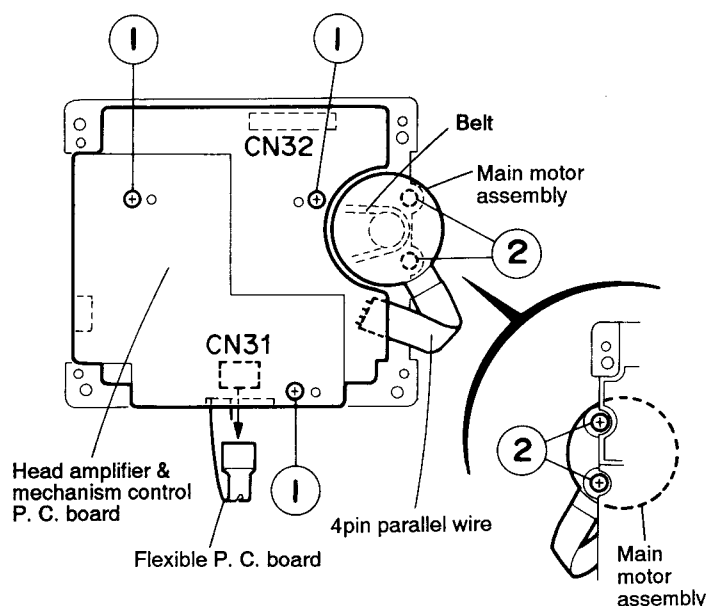


Fig. 5-22

■ Removing the Main Motor Assembly

1. Remove the two screws ② retaining the main motor assembly (See Fig. 5-22, 22a).
2. While raising the main motor, remove the capstan belt from the motor pulley (See Fig. 5-22a).

Caution 1: Be sure to handle the capstan belt so carefully that this belt will not be stained by grease and other foreign matter. Moreover, this belt should be hung while referring to the capstan belt hanging method in Fig. 5-23, 24.

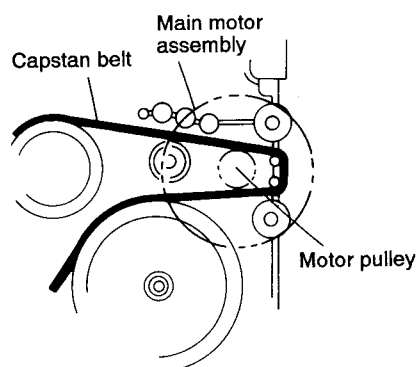


Fig.5-22a

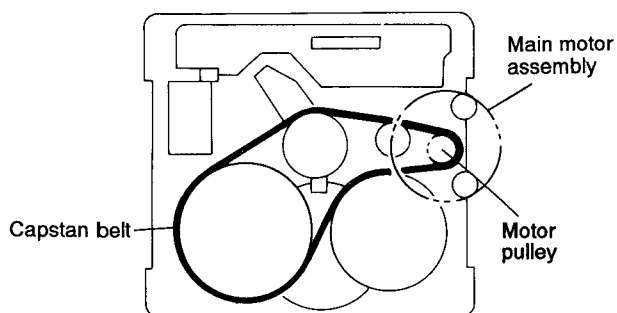


Fig. 5-23

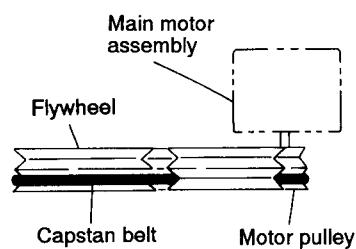


Fig. 5-24

■ Removing the Flywheel (See Figs. 5-25 and 5-26)

1. Remove the head amplifier & mechanism control P.C. board.
2. Remove the main motor assembly.
3. After turning over the cassette mechanism, remove the slit washers ⑥ and ⑦ fixing the capstan shafts R and L, and pull out the flywheels R and L respectively from behind the cassette mechanism.

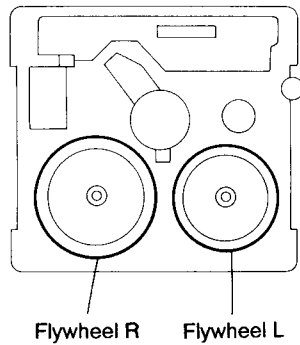


Fig. 5-26

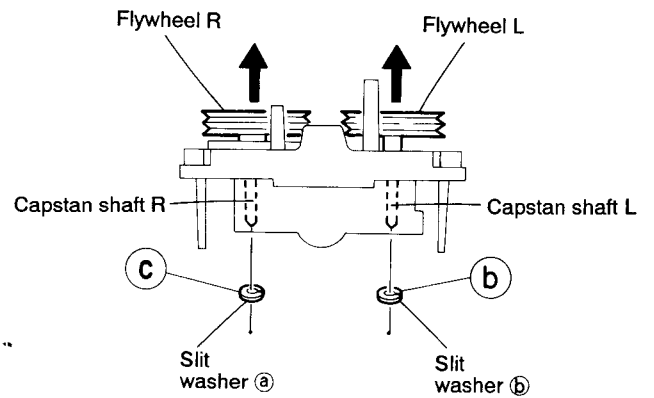


Fig. 5-25

■ Removing the Reel Pulse P.C. Board and Solenoid (See Fig. 5-27)

1. Remove the five pawls (④, ⑤, ⑥ and ⑦, ⑧) retaining the reel pulse P.C. board.
2. From the surface of the reel pulse P.C. board parts, remove the two pawls ⑨ and ⑩ retaining the solenoid.

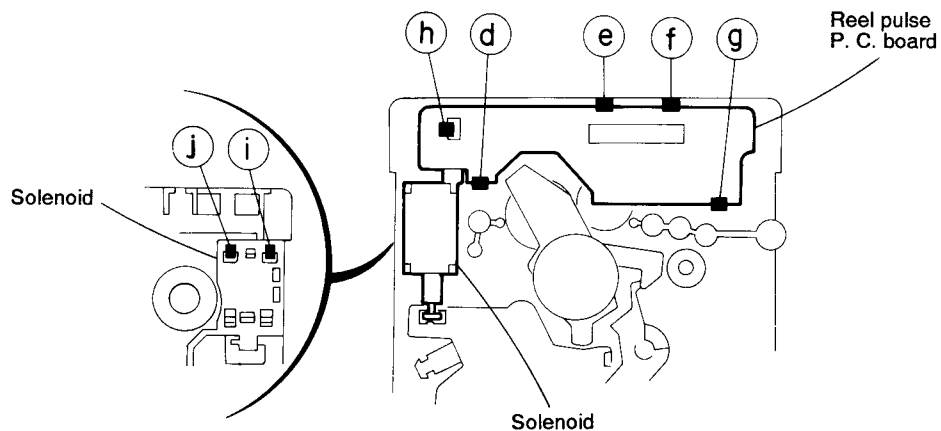


Fig. 5-27

《CD Player Unit Section》

■ Removing the CD mechanism and CD servo control P.C. board (See Figs. 5-28 and 5-29)

1. Remove the rear panel.
2. Remove the left and right side panels.
3. Remove the CD player unit.
4. After turning back the CD player unit, remove the four screws ① retaining the CD servo control P. C. board and shield.
5. From the connector CN601 on the CD servo control P. C. board, disconnect the card wire outgoing from the CD mechanism.
6. From the connector P011 on the CD mechanism P. C. board, disconnect the connector wire outgoing from the connector CN602 on the CD servo control P. C. board.
7. Remove the four screws ② retaining the CD mechanism.
8. While sliding the CD mechanism in the arrow direction, take turn table out so carefully that it does not come into contact with the chassis.

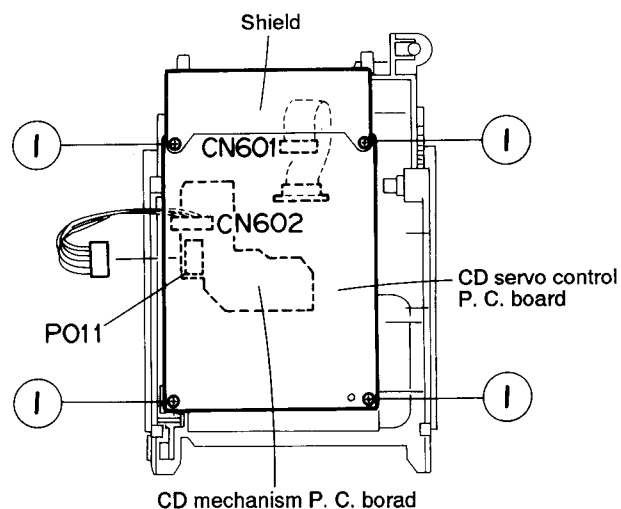


Fig. 5-28

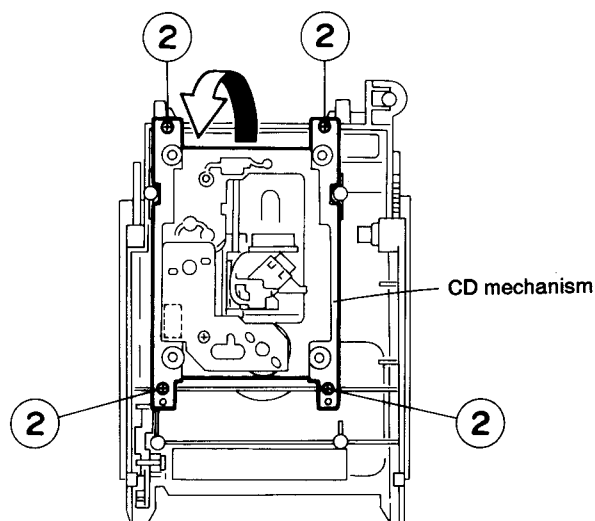


Fig. 5-29

6. Main Adjustment

■ Measurement Instruments Required for Adjustment

1. Low frequency oscillator
This oscillator should have a capacity to output 0dBs to 600 Ω at an oscillation frequency of 50Hz~20kHz.
2. Attenuator impedance: 600 Ω
3. Electronic voltmeter
4. Distortion meter
5. Frequency counter
6. Wow & flutter meter
7. Test tape
VTT 712: Tape speed and running unevenness (3kHz)
VTT 724: Reference level (1kHz)
TMT 7036: Head angle (10kHz), playback frequency characteristics (1kHz) and dubbing frequency characteristics (63, 1 and 10kHz)
Because of frequency - mixed tape with 63, 1, 10 and 14kHz (250nWb/m - 24dB), use this tape together with a filter.
8. Blank tape
TYPE I : AC-225
TYPE II : AC-514
9. Torque gauge: For play and back tension
FWD (TW2111A), REV (TW2121A) and
FF/REW (TW2231A)

■ Measurement Conditions

Power supply voltage AC230V (50Hz)
Reference output..... Speaker: 0.775V/3 Ω
Headphone: 0.245V/32 Ω
Reference frequency and input level · 1kHz, AUX: - 8dBs
Input for confirming recording and playback
characteristicsAUX:- 28dBs
Measurement output terminal Speaker J3002
※ Load resistance 3 Ω

● Radio Input signal

AM frequency	400Hz
AM modulation factor	30%
FM frequency.....	400Hz
FM frequency deviation	22.5kHz

● Tuner section

Voltage applied to tuner.....+B: DC 5.7V
VT: DC 12V

Reference measurement output..... 26.1mV (0.28V)/3 Ω
Input positions..... AM: Standard loop antenna
FM: TP1 (hot) and TP2 (GND)

● Standard measurement positions of volume

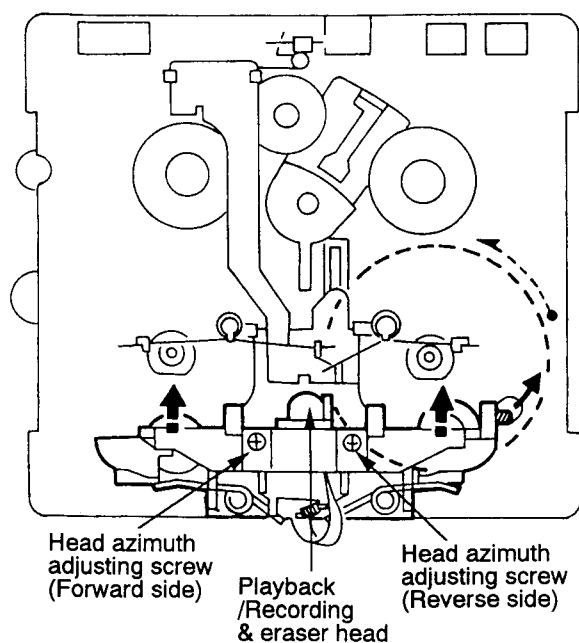
Bass	Off
Active hyper bass pro	Off
Up and down adjustment of volume	VOL. 23

Precautions for Measurement

1. Apply 30pF and 33k Ω to the IF sweeper output side and 0.082 μ F and 100k Ω in series to the sweeper input side.
2. The IF sweeper output level should be made as low as possible within the adjustable range.
3. Since the IF sweeper is a fixed device, there is no need to adjust this sweeper.
4. Since a ceramic oscillator is used, there is no need to perform any MPX adjustment.
5. Since a fixed coil is used, there is no need to adjust the FM tracking.
6. The input and output earth systems are separated. In case of simultaneously measuring the voltage in both of the input and output systems with an electronic voltmeter for two channels, therefore, the earth should be connected particularly carefully.
7. In the case of BTL connection amp., the minus terminal of speaker is not for earthing. Therefore, be sure not to connect any other earth terminal to this terminal. This system is of an OTL system.
8. For connecting a dummy resistor when measuring the output, use the wire with a greater core size.
9. Whenever any mixed tape is used, use the band pass filter (DV-12).

《Arrangement of Adjusting Positions》

● Cassette mechanism section



● Cassette mechanism section (Back side)

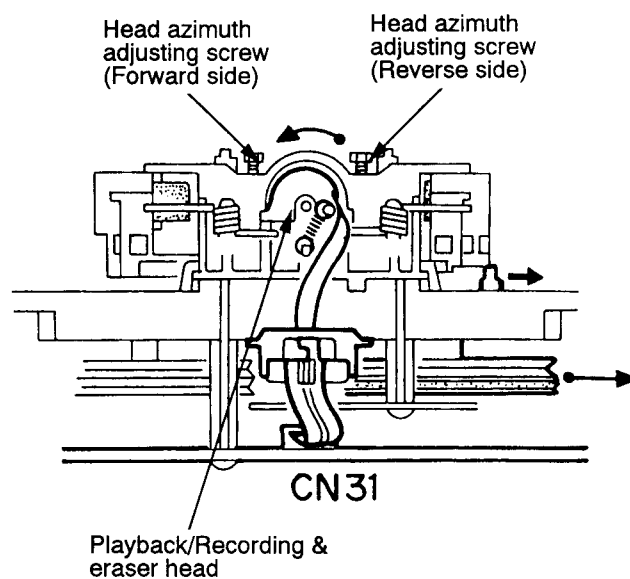


Fig. 6-1

● Front panel assembly Section

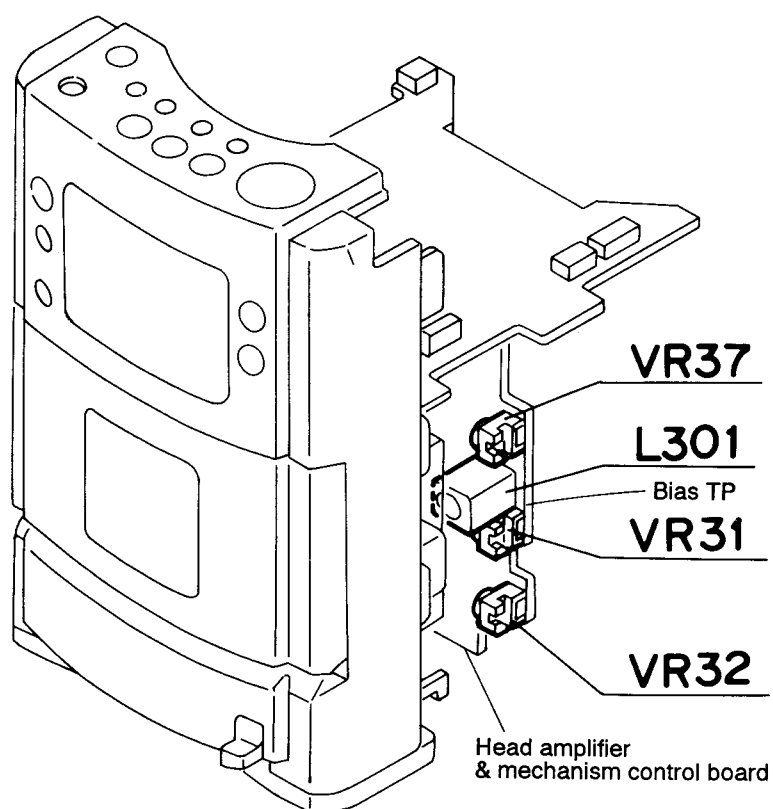


Fig. 6-2

■ Tape Recorder Section

Items	Measurement conditions	Measurement method	Standard values	Adjusting positions
Confirmation of head angle	Test tape : TMT7036 (10kHz) Measurement output terminal : Speaker terminal Speaker R (Load resistance: 3 Ω) : Headphone terminal	① Play back the test tape TMT7036 (10kHz). ② With the recording & playback mechanism, adjust the head azimuth screw so that the forward and reverse output levels become maximum. After adjustment, lock the head azimuth at least by half a turn. ③ In either case, this adjustment should be performed in both the forward and reverse directions with the head azimuth screw.	Maximum output	Adjust the head azimuth screw only when the head has been changed.
Confirmation of tape speed	Test tape : VTT712 (3kHz) or TMT7036 (3kHz) Measurement output terminal : Headphone terminal	Adjust VR37 so that the frequency counter reading becomes $3,010\text{Hz} \pm 15\text{Hz}$ when playing back the test tape VTT712 (3kHz) with playback and recording mechanism after ending forward winding of the tape.	Tape speed of deck : $3,010\text{Hz} \pm 15\text{Hz}$	VR37

■ Reference Values for Confirmation Items

Items	Measurement conditions	Measurement method	Standard values	Remarks
Difference between the forward and reverse speed	Test tape : TMT7036 (10kHz) Measurement output terminal : Speaker terminal Speaker R (Load resistance: 3 Ω) measurement output terminal : Headphone terminal	When the test tape VTT712 (3kHz) has been played back with the recording and playback mechanism at the beginning of forward winding, the frequency counter reading of the difference between both of the mechanisms should be 6.0Hz or less.	6.0Hz or less	
Wow & flutter	Test tape : TMT7036 (10kHz) Measurement output terminal : Headphone terminal	When the test tape VTT712 (3kHz) has been played back with the recording and playback mechanism at the beginning of forward winding, the frequency counter reading of wow & flutter should be 0.25% or less (WRMS).	0.25% or less (WRMS)	

■ Electrical Performance

Items	Measurement conditions	Measurement method	Standard values	Adjusting positions
Adjustment of recording bias current (Reference value)	<ul style="list-style-type: none"> Mode: Forward or reverse mode Recording mode Test tape : AC-514 to TYPE II and AC-225 to TYPE I Measurement output terminal : Both recording and headphone terminals	① With the recording and playback mechanism, load the test tapes (AC-514 to TYPE II and AC-225 to TYPE I), and set the mechanism to the recording and pausing conditions in advance. ② After connecting 100 Ω in series to the recorder head, measure the bias current with a valve voltmeter at both of the terminals. ③ After resetting the [PAUSE] mode, start recording. At this time, adjust VR31 for LcH and VR32 for RcH so that the recording bias current values become 4.0 μ A (TYPE I) and 4.20 μ A (TYPE II).	AC-225 : 4.20 μ A AC-514 : 4.0 μ A	LcH :VR31 RcH :VR32
Adjustment of recording and playback frequency characteristics	Reference frequency : 1kHz and 10kHz (REF.: -20dB) Test tape : TYPE II : AC-514 Measurement input terminal : OSC IN	① With the recording and playback mechanism, load the test tape (AC-514 to TYPE II), and set the mechanism to the recording and pausing conditions in advance. ② While repetitively inputting the reference frequency signal of 1kHz and 10kHz from OSC IN, record and play back the test tape. ③ While recording and playing back the test tape in TYPE II, adjust VR31 for LcH and VR 32 for RcH so that the output deviation between 1kHz and 10kHz becomes -1dB \pm 2dB.	Output deviation between 1kHz and 10kHz : -1dB \pm 2dB	LcH :VR31 RcH :VR32

■ Reference Values for Electrical Function Confirmation Items

Items	Measurement conditions	Measurement method	Standard values	Remarks
Recording bias frequency	Forward or reverse <ul style="list-style-type: none"> Test tape : TYPE II (AC-514) Measurement terminal: BIAS TP on P.C. board 	① While changing over to and from BIAS 1 and 2, confirm that the frequency is changed. ② With the recording and playback mechanism, load the test tape (AC-514 to TYPE II), and set the mechanism to the recording and pausing conditions in advance. ③ Confirm that the BIAS TP frequency on the P.C. board is 100kHz \pm 6kHz.	100kHz \pm 6kHz	
Eraser current (Reference value)	Forward or reverse <ul style="list-style-type: none"> Recording mode Test tape : AC-514 to TYPE II and AC-225 to TYPE I Measurement terminal: Both of the eraser head terminals	① With the recording and playback mechanism, load the test tapes (AC-514 to TYPE II and AC-225 to TYPE I), and set the mechanism to the recording and pausing conditions in advance. ② After setting to the recording conditions, connect 1W in series to the eraser head on the recording and playback mechanism side, and measure the eraser current from both of the eraser terminals.	TYPE II : 120mA TYPE I : 75mA	

7. Out Line of Main IC

■ IC701: μ PD78064GF – 091 (System CPU)

Pin No.	Symbol	BUP	I/O	Function
1	SDATA	H	I/O	Serial data (TUNER PLL / TAPE IC)
2	SCK	H	O	Serial clock (TUNER PLL / TAPE IC)
3	QRIN		I	CD Q code data
4	–		–	– (Not used)
5	SQCK	L	O	CD Q code data synchronizing clock
6	IC		–	Connected to Vss
7	X2		–	Main system clock: 4.19MHz
8	X1		I	Main system clock: 4.19MHz
9	Vdd		–	Power supply
10	XT1		I	Sub system clock: 32.768kHz
11	XT2		–	Sub system clock: 32.768kHz
12	RESET		I	Reset
13	REM		I	Remote control
14	RDSCK		–	Not used
15	JOG1		I	JOG encoder 1
16	BEAT2	L	O	Main clock selection 2
17	BEAT1	L	O	Main clock selection 1
18	+BCTL	H	O	Switched 5V control ("H" = off at 5V)
19	$\overline{\text{XRST}}$	H	O	CD LSI reset
20	MCLK	L	O	CD LSI command clock
21	MDATA	L	O	CD LSI command data
22	MLD	L	O	CD LSI command load
23	$\overline{\text{PBMUTE}}$	L	O	Tape playback muting (Mute = "L")
24	STTA	L	O	Tape IC strobe
25	REEL		I	Tape end detection
26	F. AUX	L	O	Function AUX (AUX = "L")
27	AVss		–	AD converter GND
28	CDSAFETY		I	CD abnormal voltage detection
29	DOOR/RST		I	[REST/CLOSE] switch
30	SAFETY1		I	Abnormal voltage detection 1
31	SAFETY0		I	Abnormal voltage detection 2
32	KEY1		I	Body key input 1
33	KEY0		I	Body key input 0 (including version selection)
34	TAPE0		I	TAPE SWITCH 0
35	TAPE1		I	TAPE SWITCH 1
36	AVdd		–	AD converter power supply with a same potential as that of Vdd
37	AVref		–	AD converter reference voltage: off at [SLOW] mode
38	BUP	H	I	Backup power supply decision ("H" = Backup)

Pin No.	Symbol	BUP	I/O	Function
39	F. TU	H	O	Function tuner (Tuner = "H")
40	Vss		–	GND
41	$\overline{\text{MPX}}$		I	FM stereo detection ("L" = Stereo)
42	PERIOD	L	O	Tuner PLL strobe
43	JOG2		I	JOG encoder 2
44	BASS	H	O	Bass control (PWM)
45	TRE	H	O	TRE control (PWM)
46	VOL	H	O	VOL. control (PWM)
47	$\overline{\text{AHB}}$	H	O	Active hyper bass ON/OFF (ON= "L", OFF= "H")
48	$\overline{\text{SMUTE}}$	H	O	System muting (Muting = "L")
49	P. OUT	L	O	Power ON/OFF (Power ON = "H")
50	F. CD	H	O	Function CD (CD = "H")
51	COM0	L	O	LCD common 0
52	COM1	L	O	LCD common 1
53	COM2	L	O	LCD common 2
54	COM3	L	O	LCD common 3
55	BIAS	L	–	LCD bias voltage
56	VLC0		–	LCD bias voltage BIAS>VLC0>VLC1>VLC2
57	VLC1		–	LCD bias voltage
58	VLC2		–	LCD bias voltage
59	Vss		–	GND
60	S0	L	O	LCD segment 0
61	S1	L	O	LCD segment 1
62	S2	L	O	LCD segment 2
63	S3	L	O	LCD segment 3
64	S4	L	O	LCD segment 4
65	S5	L	O	LCD segment 5
66	S6	L	O	LCD segment 6
67	S7	L	O	LCD segment 7
68	S8	L	O	LCD segment 8
69	S9	L	O	LCD segment 9
70	S10	L	O	LCD segment 10
71	S11	L	O	LCD segment 11
72	S12	L	O	LCD segment 12
73	S13	L	O	LCD segment 13
74	S14	L	O	LCD segment 14
75	S15	L	O	LCD segment 15
76	S16	L	O	LCD segment 16

Pin No.	Symbol	BUP	I/O	Function
77	S17	L	O	LCD segment 17
78	S18	L	O	LCD segment 18
79	S19	L	O	LCD segment 19
80	S20	L	O	LCD segment 20
81	S21	L	O	LCD segment 21
82	S22	L	O	LCD segment 22
83	S23	L	O	LCD segment 23
84	S24	L	O	LCD segment 24
85	S25	L	O	LCD segment 25
86	S26	L	O	LCD segment 26
87	S27	L	O	LCD segment 27
88	S28	L	O	LCD segment 28

Pin No.	Symbol	BUP	I/O	Function
89	S29	L	O	LCD segment 29
90	S30	L	O	LCD segment 30
91	S31	L	O	LCD segment 31
92	S32	L	O	LCD segment 32
93	S33	L	O	LCD segment 33
94	S34	L	O	LCD segment 34
95	S35	L	O	LCD segment 35
96	S36	L	O	LCD segment 36
97	S37	L	O	LCD segment 37
98	S38	L	O	LCD segment 38
99	S39	L	O	LCD segment 39
100	STAT	L	I	CD LSI status

■ IC38: BH3852S (Electrical Volume)

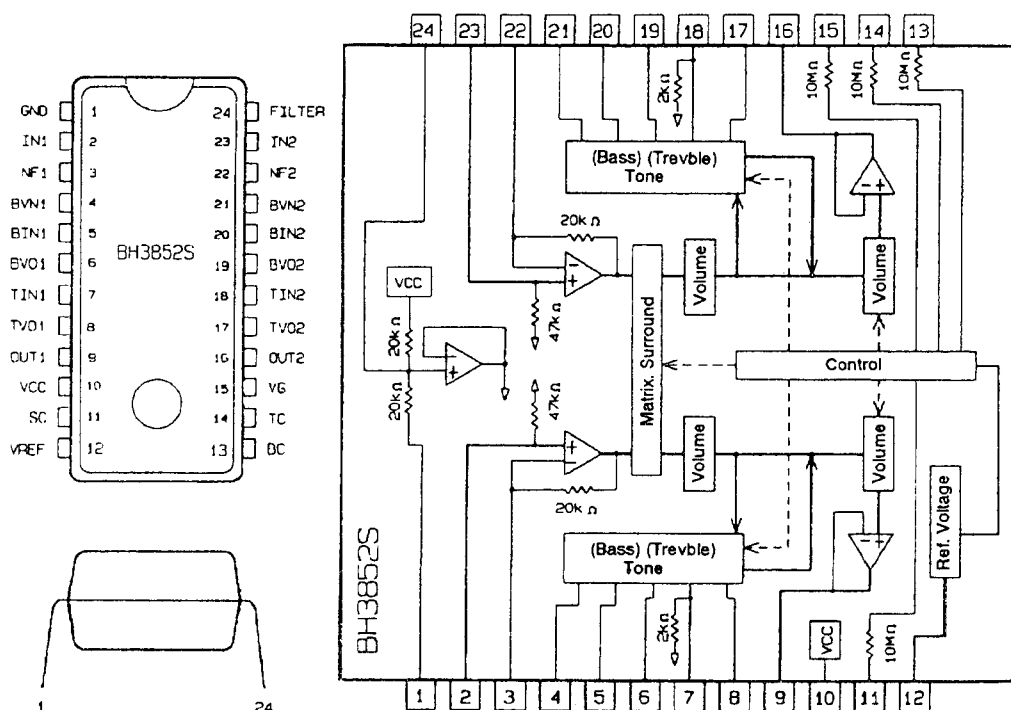


Fig. 7-1

8. Wiring Connections

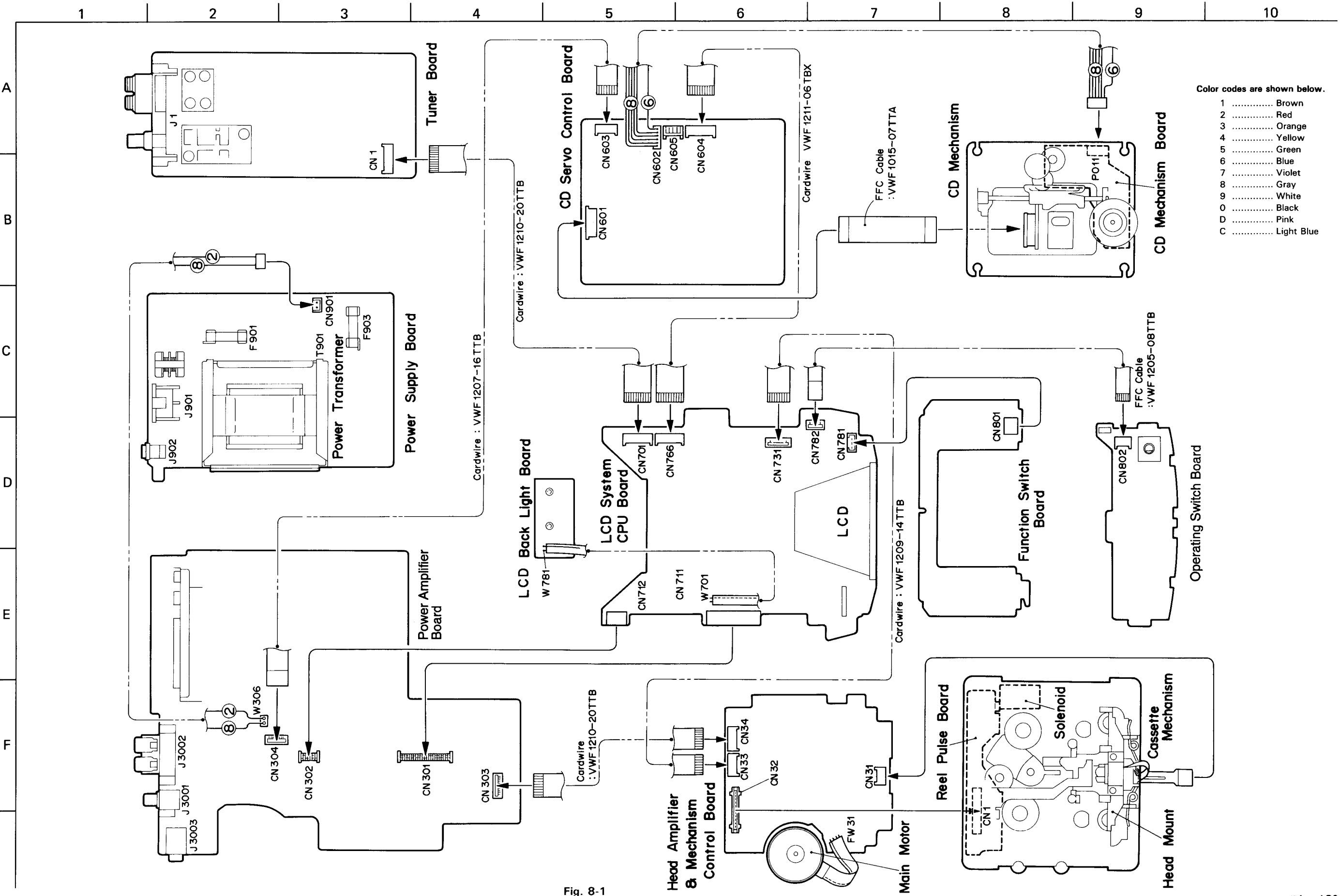


Fig. 8-1

9. Analytic Drawing and Parts List

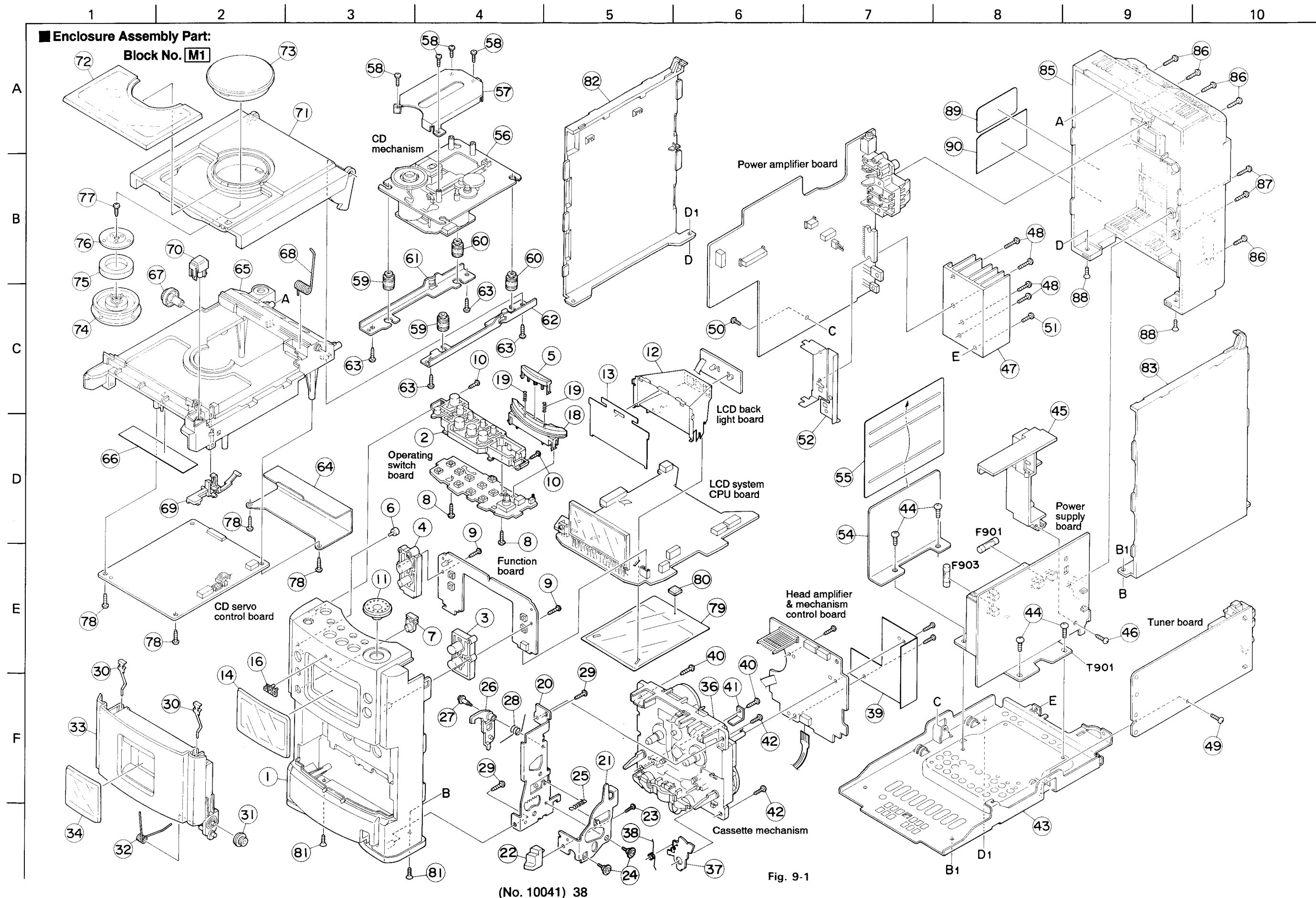


Fig. 9-1

■ Enclosure Assembly Parts List

BLOCK NO. M1MM

△	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY	SUFFIX	CLR
	1	VJG1473-003	FRONT PANEL		1		
	2	VXP3867-002	PUSH BUTTON(A)		1		
	3	VXP5352-002	PUSH BUTTON(B)		1		
	4	VXP5353-002	PUSH BUTTON(C)		1		
	5	VXP5358-002	SNOOZE BUTTON		1		
	6	VJK4493-001SC	LENS(STANDBY)		1		
	7	VJK4504-001	REMOCON LENS		1		
	8	SBSF2608Z	SCREW	FOR F.P+PWB	2		
	9	SBSF3008Z	SCREW	BUTTON+PWB	2		
	10	SBSF2608Z	SCREW	FOR F.P+BUTTON	2		
	11	VXL4453-002	MULTI JOG DIAL		1		
	12	VYH3982-001	LAMP CASE		1		
	13	VYTT704-001	LCD FILTER	FOR LCD	1		
	14	VJT4241-002	LCD LENS		1		
	16	E406971-221	JVC MARK		1		
	18	VYH8160-002	BUTTON COVER		1		
	19	VKW5306-001	COMP.SPRING		2		
	20	VYH3983-001	DOOR HOLDER		1		
	21	VYH8149-001	EJECT LEVER		1		
	22	VXQ4125-002	EJECT KNOB		1		
	23	SBSF2608Z	SCREW	FOR E.LVR+E.KNO	1		
	24	VKZ4323-002	SCREW	D.HOLDER+E.LEVE	2		
	25	VKW3002-274	TENSION SPRING	FOR E.LEVER	1		
	26	VYH7347-001	EJECT ARM		1		
	27	VKZ4341-001	SPECIAL SCREW	FOR EJECT ARM	1		
	28	VKW4938-001	TORTION SPRING	FOR EJECT ARM	1		
	29	SBSF3008Z	SCREW	F.P+D.HOLDER	2		
	30	VKY4180-001	CASSETTE SPRING		2		
	31	VYH5601-001	GEAR		1		
	32	VKW5295-001	DOOR SPRING		1		
	33	VJT2384-002	CASSETTE DOOR		1		
	34	VJT4242-002	DOOR LENS		1		
	36	-----	CASSETTE MECHA		1		
	37	VKL7850-202	EJECT SAFTY(R)		1		
	38	VKW5258-002	TORSION SPRING		1		
	39	VMA4723-001	SHIELD		1		
	40	SBSF3010Z	SCREW	F.PANEL+MECHA	2		
	41	VYH8183-001	BRACKET	FOR CASSETTE DO	1		
	42	SBST3008Z	SCREW	DOOR HOL+MECHA	2		
	43	VYH1263-001	BOTTOM CHASSIS		1		
	44	SBST4006Z	SCREW	CHASSIS+TRANS	4		
	45	VYH3984-001	JACK HOLDER		1		
	46	SBSF3010Z	SCREW	PWB+JACK HOL	1		
	47	VYH8153-001	RADIATION		1		
	48	SBST3012Z	SCREW	RADI+IC	4		
	49	SBST3006Z	SCREW	RADI+CHASSIS	1		
	50	SBST3006Z	SCREW	MAIN PWB+CHASSI	1		
	51	SBST3006Z	SCREW	TUNER PWB+CHASS	1		
	52	VYH3987-001	IC HOLDER		1		
	54	VMA3239-001	SHIELD		1		
	55	VMA4720-001	AARRIER		1		
	56	-----	CD MECHA ASSY		1		
	57	VJD5410-005	PICK COVER		1		
	58	SDSF2006M	SCREW	CD MECHA+P.COVE	4		
	59	E75609-001	INSULATOR		2		

BLOCK NO. M1MM

REF.	PARTS NO.	PARTS NAME	REMARKS	QTY	SUFFIX	CLR
60	E75609-002	INSULATOR		2		
61	VYH8089-001SC	CD MECHA HOLDER		1		
62	VYH8089-002SC	CD MECHA HOLDER		1		
63	SBSF3010Z	SCREW	CD CASE+M.HOLDE	4		
64	VMA4692-002SC	SHIELD	FOR CD MECHA WI	1		
65	VJD1216-003	CD CASE		1		
66	E406709-001	LASER CAUTION		1		
67	VYH4769-002	GEAR		1		
68	VKW5276-001	CD DOOR SPRING		1		
69	VYH8152-001	LOCK LEVER		1		
70	VXP5354-002	CD AJECT KNOB		1		
71	VJT2385-002	CD DOOR		1		
72	VJT3392-002	CD LENS		1		
73	VJT4245-002	CD ORNAMENT		1		
74	VYH3726-002SS	CLAMPER		1		
75	VYH7313-003	MAGNET		1		
76	VYH7677-201	YOKE		1		
77	SDSF2606Z	SCREW	FOR CLAMPER	1		
78	SBSF3010Z	SCREW	CD PWB+CD CASE	4		
79	VMA4721-002	SHIELD		1		
80	PU59915-105	SPACER	FOR SHIELD	1		
81	SSST3008Z	SCREW	CHASSIS+F.PANEL	2		
82	VJD2488-003	SIDE PANEL(L)		1		
83	VJD2489-003	SIDE PANEL(R)		1		
85	VJG1477-014	REAR PANEL		1		
86	SBSF3010Z	SCREW	JACK+R.P	5		
87	SBSF3010Z	SCREW	R.P+CD CASE	2		
88	SSST3008Z	SCREW	FOR R.P+CHASSIS	2		
89	E70891-001	CLASS 1 LABEL		1		
90	VYN9317-C005T	NAME PLATE		1	E	
	VYN9317-C002T	NAME PLATE		1	B	
	VYN9317-C008T	NAME PLATE		1	G	
	VYN9317-C009T	NAME PLATE		1	EN	
F 901	QMF51E2-R40SBS	FUSE		1		
F 903	QMF51E2-5R0	FUSE		1		
T 901	VTP66J2-12L	POWER TRANS		1		

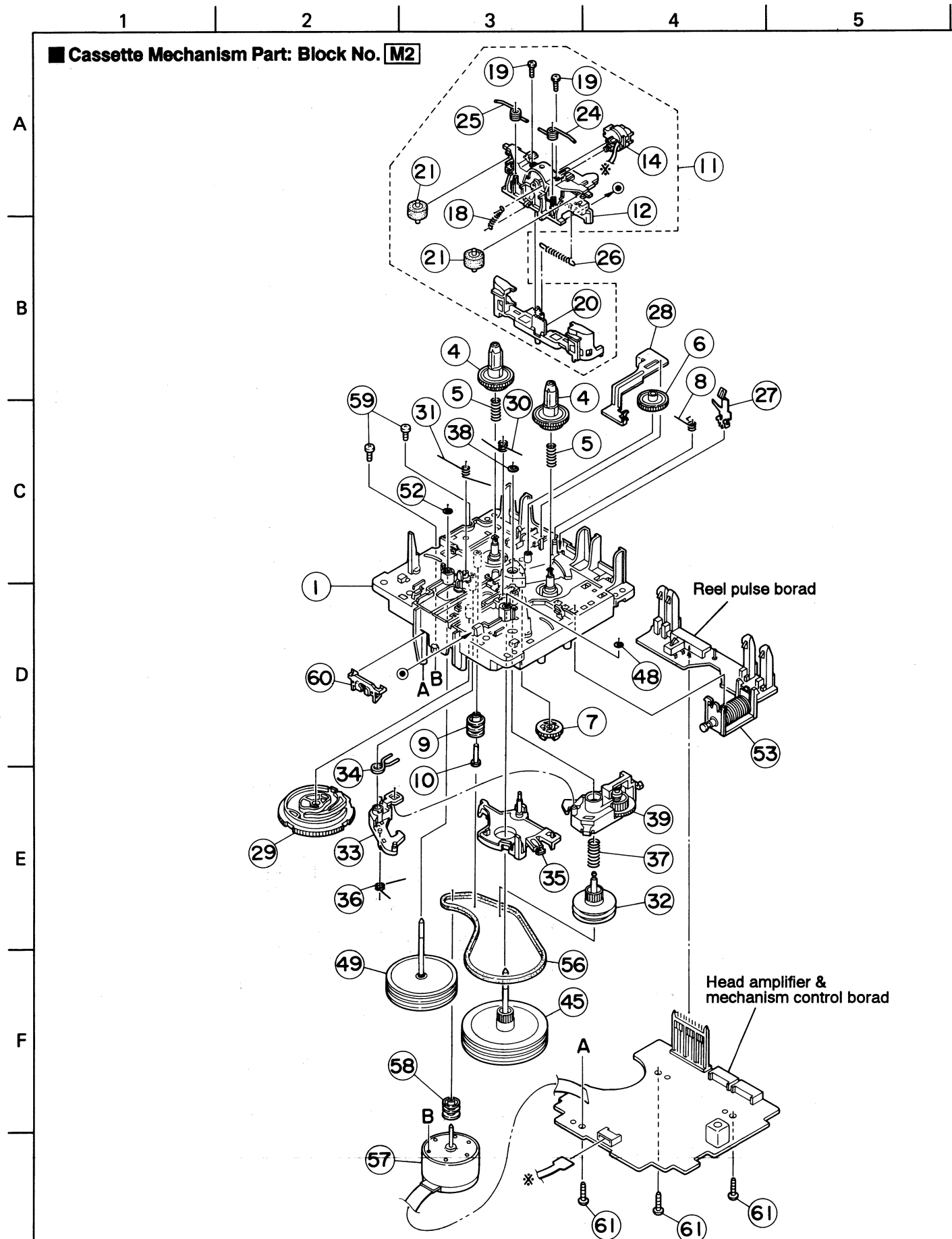


Fig. 9-2

■ **Cassette Mechanism Parts List**

BLOCK NO. M2MM						
REF.	PARTS NO.	PARTS NAME	REMARKS	QTY	SUFFIX	CLR
1	VKS1165-00C	CHASSIS B. ASSY		1		
4	VKS2274-002	REEL GEAR		2		
5	VKW5286-002	B.T. SPRING		2		
6	VKS5559-001	PLAY IDLE GEAR		1		
7	VKS5560-001	FR IDLE GEAR		1		
8	VKW5296-001	EARTH SPRING		1		
9	VKR4749-002	IDLE PULLEY		1		
10	VKH5786-002	SHAFT		1		
11	VKS2275-00C	HEAD MOUNT ASSY		1		
12	VKS1167-001	HEAD MOUNT BASE		1		
14	VGH0425-544	HEAD HOLDER ASY	VKS2275-00B	1		
18	VKW5302-001	HEAD SPRING		1		
19	VKZ4730-001	SPECIAL SCREW		2		
20	VKS2277-005	DIRECTION LEVER		1		
21	VKP4233-00A	PINCH ROL. ASSY		2		
24	VKW5299-001	PIN.ROL.SP.(R)		1		
25	VKW5300-001	PIN.ROL.SP.(L)		1		
26	VKW5285-001	RETURN SPRING		1		
27	VKY3149-001	CASSETTE SP.		1		
28	VKM3906-002	PLAY SW.LEVER		1		
29	VKS1166-001	CONTROL CAM		1		
30	VKW5279-001	HEAD BASE SP(R)		1		
31	VKW5280-001	HEAD BASE SP(L)		1		
32	VKR3199-001	MAIN PULLEY		1		
33	VKS3785-001	FR ARM		1		
34	VKW5284-002	SWING SPRING		1		
35	VKS2278-001	TRIGGER ARM		1		
36	VKW5301-001	FR SPRING		1		
37	VKW5266-001	ELEVATOR SPRING		1		
38	WDL214025	WASHER		1		
39	VKS3786-00D	CLUTCH ASSY		1		
45	VKF3205-00B	F.WHEEL ASSY(R)		1		
48	WDL183525-6	SLIT WASHER		1		
49	VKF3207-00B	F.WHEEL ASSY(L)		1		
52	WDL173525-2	SLIT WASHER		1		
53	VGP2401-00A	DC SOLENOID		1		
56	VKB3000-178	CAPSTAN BELT		1		
57	MSI-5U2LWA	D.C.MOTOR ASS'Y		1		
58	VKR4761-001	MOTOR PULLEY		1		
59	SPSP2604Z	SCREW		2		
60	VKS5577-001	FPC HOLDER		1		
61	SBSF2608Z	SCREW		3		

10. Block Diagram

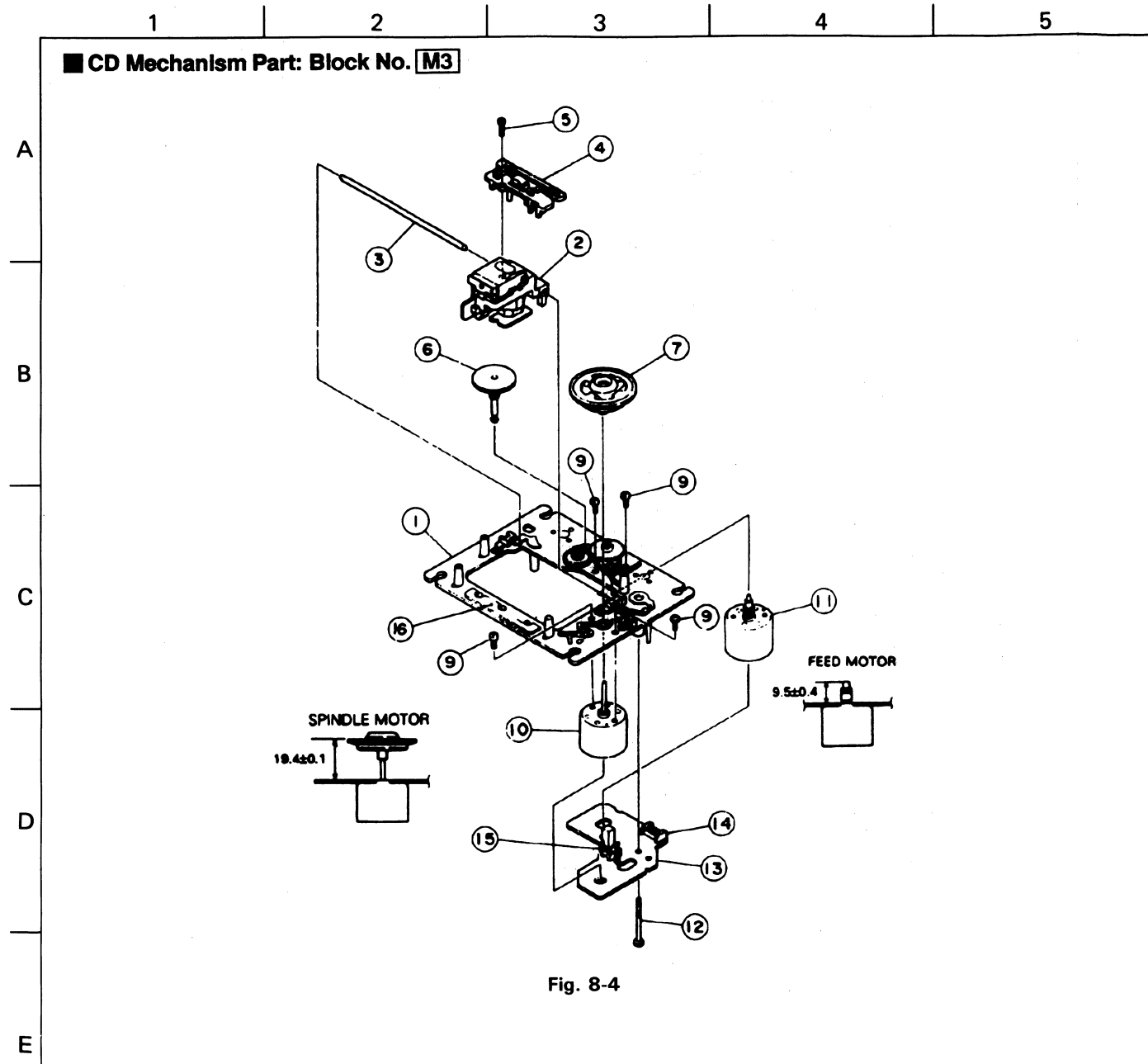


Fig. 8-4

■ CD Mechanism Parts List

		BLOCK NO. M4MM					
△	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY	SUFFIX	CLR
	1	EPB-002A	BASE ASS'Y		1		
	2	OPTIMA-6S	PIC-UP		1		
	3	E406777-001	GUIDE SHAFT		1		
	4	E307746-001	CD RACK		1		
	5	SDSF2006Z	SCREW	CD LACK ASS'Y	1		
	6	EPB-003A	MECHA GIAR		1		
	7	E75807-301	CD T.TABLE ASSY		1		
	9	SDSP2003N	SCREW	FOR MOTOR	4		
	10	E406783-001	SP MOTOR	SPINDL MOTOR	1		
	11	E406784-001SA	DC MOTOR ASS'Y	FEED MOTOR	1		
	12	E75832-001	S.SCREW	M.REAF SWITCH	1		
	13	EMW10190-001	BOARD	LEAF SWITCH	1		
	14	EMV5109-006B	6P PLUG ASSY		1		
	15	ESB1100-005	LEAF SWITCH		1		
	16	E407212-001	DAMPER		1		

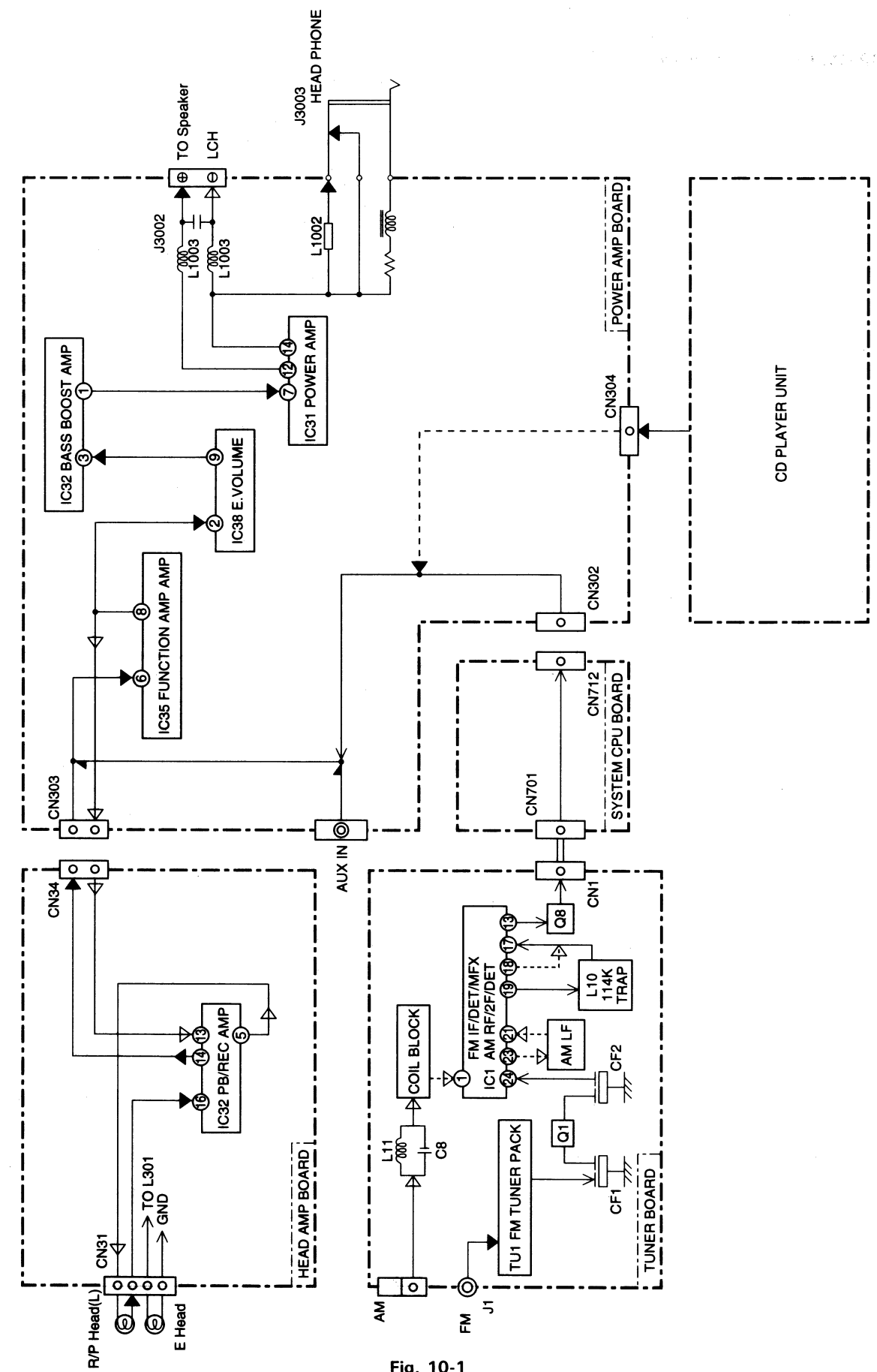
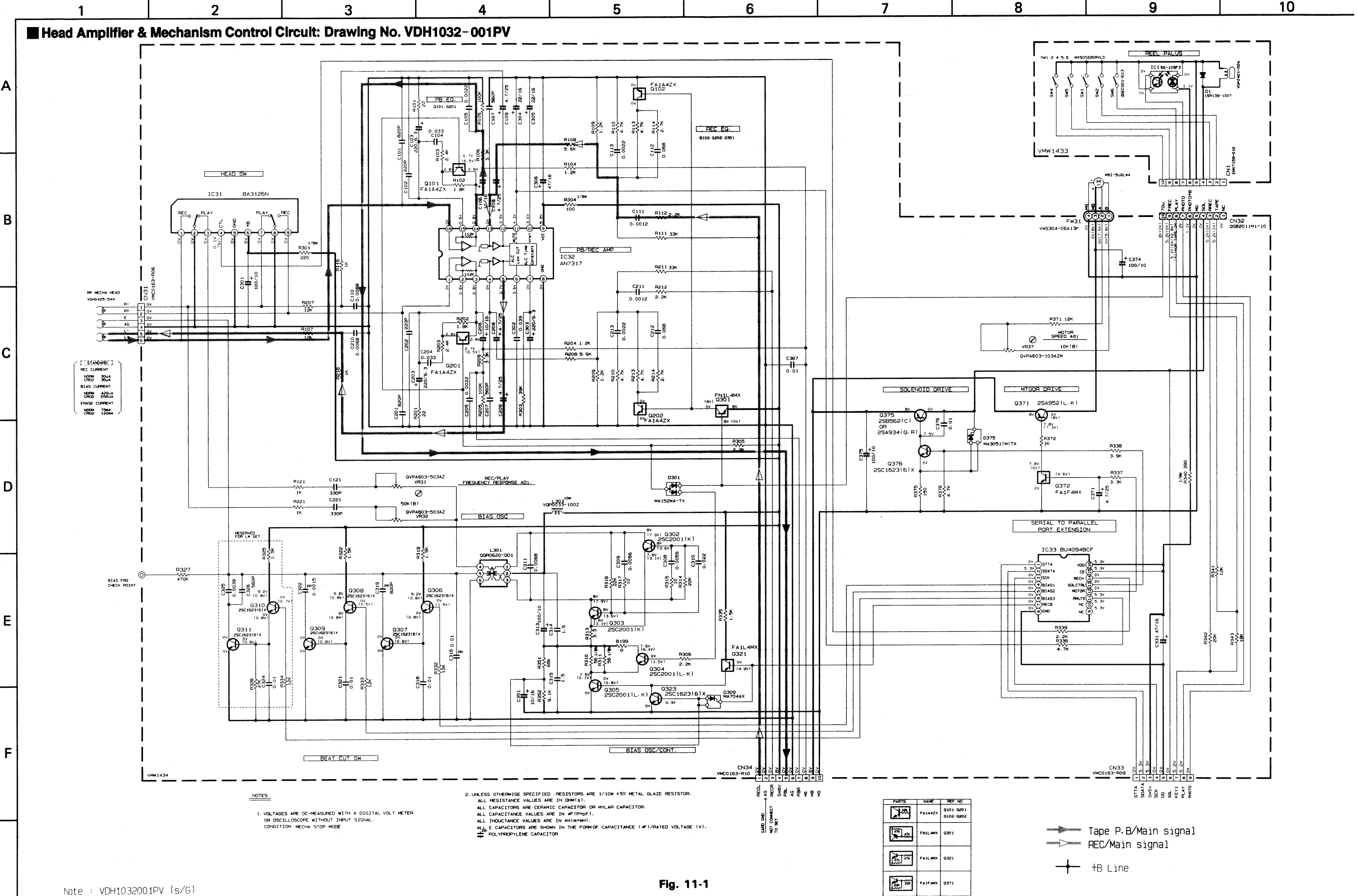


Fig. 10-1

11. Standard Schematic Diagrams



Note : VDH1032001PV (s/G)

LCD & System CPU Circuit: Drawing No. VDH9316-001SV

A

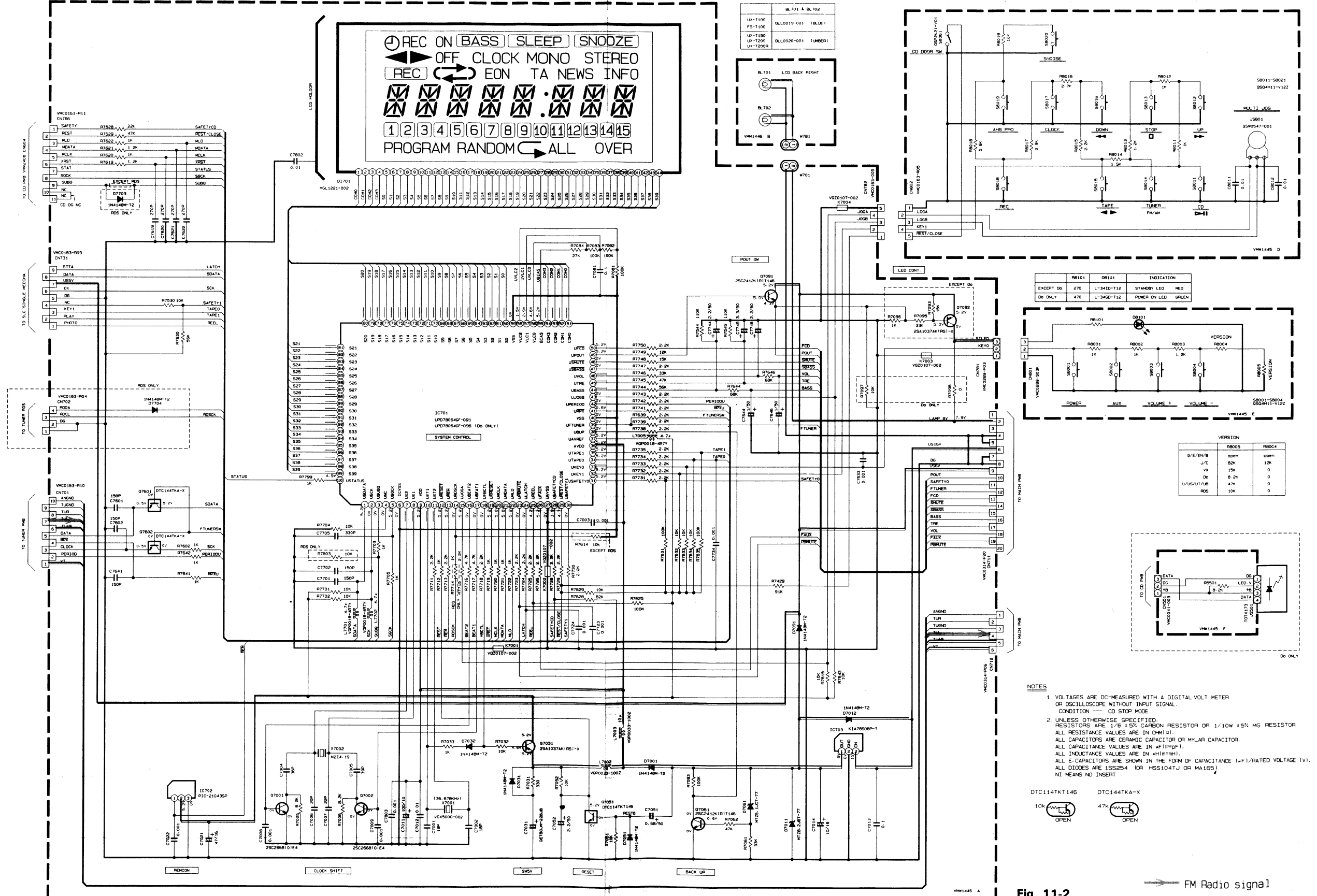
B

C

D

E

F



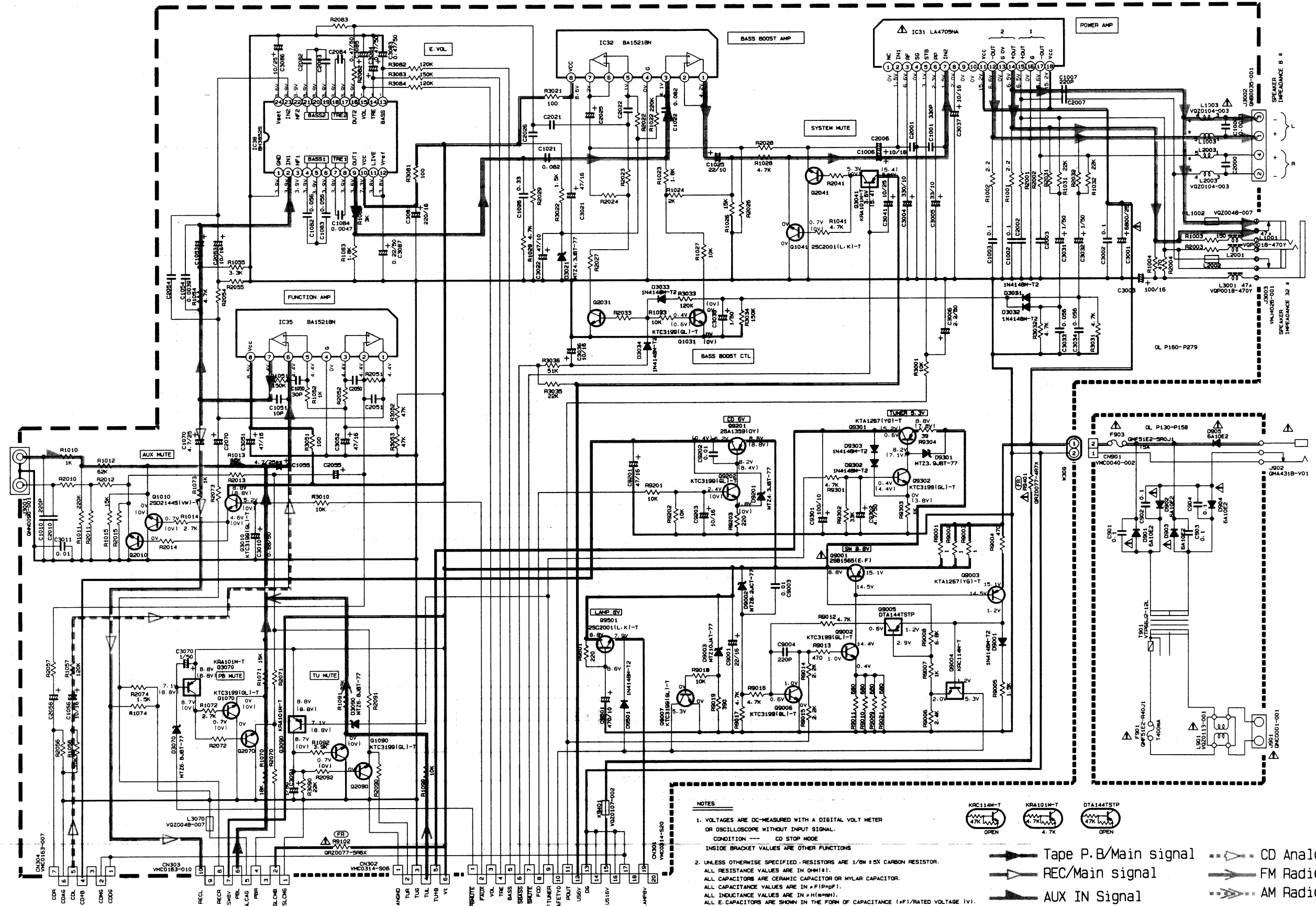
Note: VDH9316001SV(s/G)

(No. 10041) 44

Fig. 11-2

FM Radio signal
+B Line

■ **Function** Amplifier & Power Amplifier Circuit: Drawing No. VDH9316-005AW



Note : VDH9316005AW(s/G)

Fig. 11-3

CD Servo Control Circuit: Drawing No. VDH1010-001CW

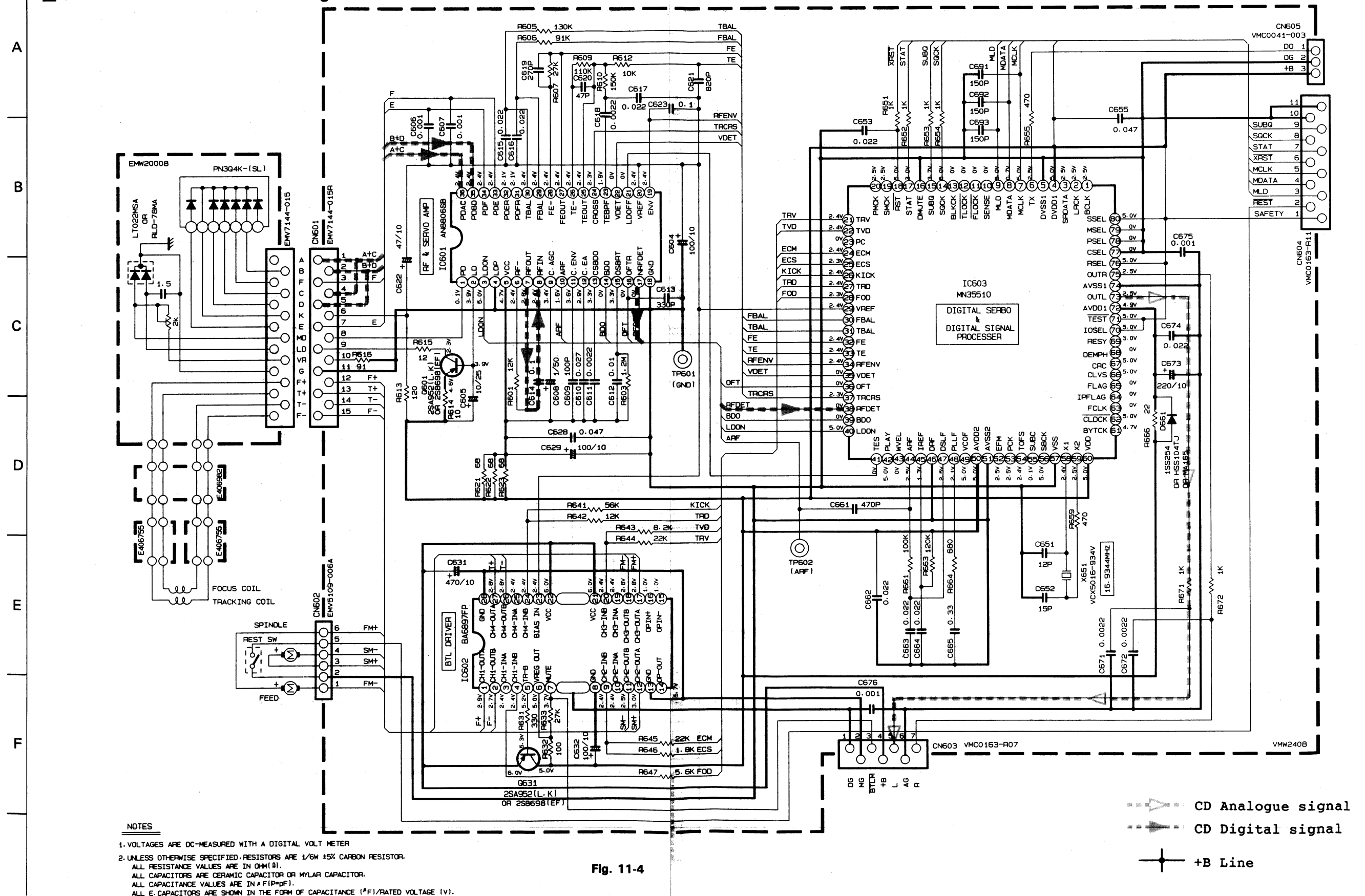


Fig. 11-4

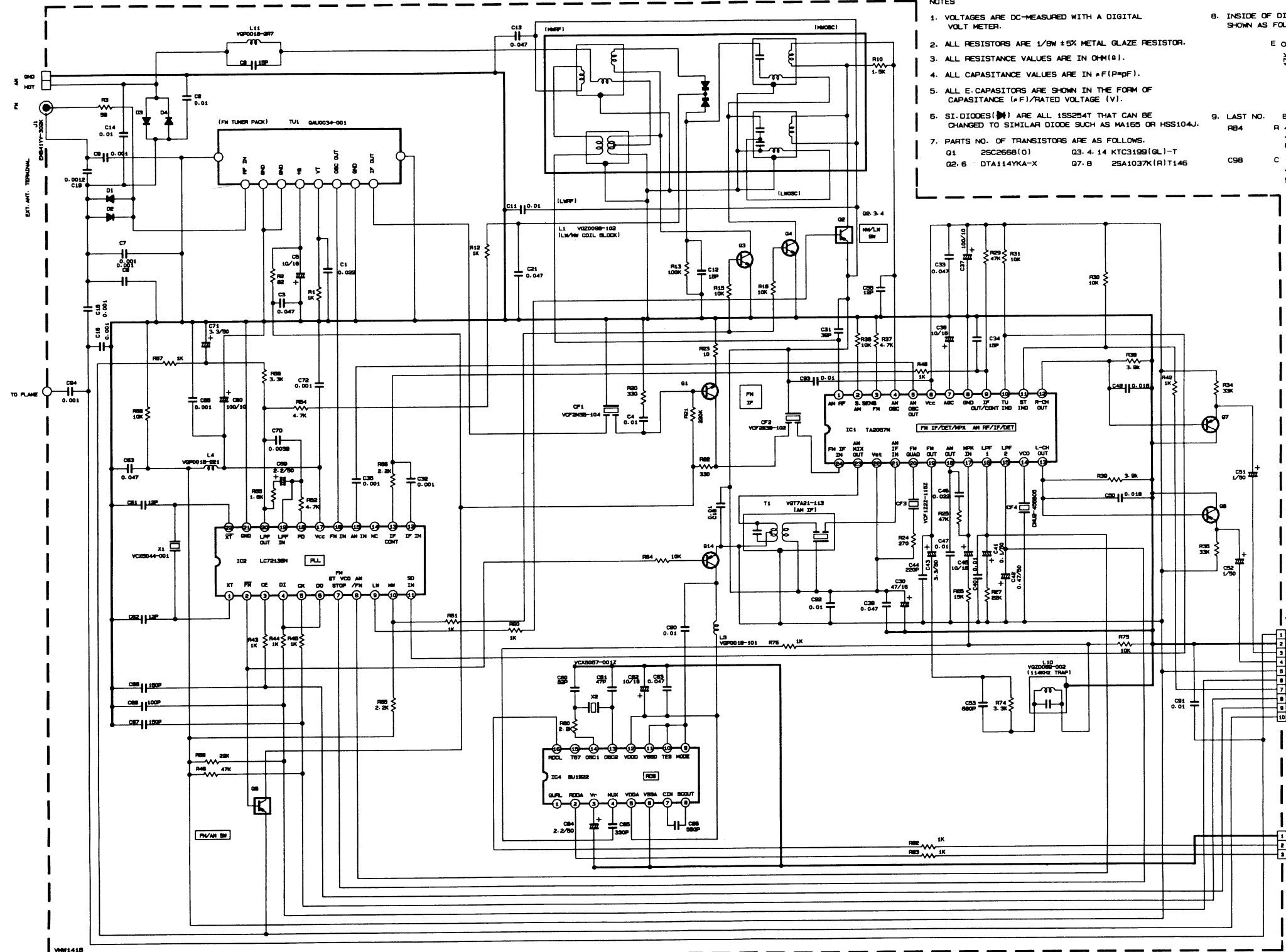
(No. 10041) 46

Note : VDH1010001CW

■ Tuner Circuit: Drawing No. VDH1038-101TW

A
B
C
D
E
F

1 2 3 4 5 6 7 8 9 10



- NOTES
1. VOLTAGES ARE DC-MEASURED WITH A DIGITAL VOLT METER.
 2. ALL RESISTORS ARE 1/8W ±5% METAL GLAZE RESISTOR.
 3. ALL RESISTANCE VALUES ARE IN OHM(Ω).
 4. ALL CAPACITANCE VALUES ARE IN pF(pF).
 5. ALL E-CAPACITORS ARE SHOWN IN THE FORM OF CAPACITANCE (μF)/RATED VOLTAGE (V).
 6. SI-DIODES(▶) ARE ALL 1SS254T THAT CAN BE CHANGED TO SIMILAR DIODE SUCH AS MA165 OR HSS104J.
 7. PARTS NO. OF TRANSISTORS ARE AS FOLLOWS:
Q1 2SC2668(0) Q3 4.14 KTC3199(6L)-T
Q2 6 DTA114YKA-X Q7 8 2SA1037K(R)T146
 8. INSIDE OF DIGITAL TRANSISTORS ARE SHOWN AS FOLLOWS:
E O C
DTA114YK
A B
 9. LAST NO. BLANK NO.
R 4-9: 11, 14, 17-19, 28, 32, 33
40, 41, 47, 49-51, 53, 58, 59
62-64, 67, 70-73, 77-79, 81
C 10, 17, 20, 22-29, 38
48, 54, 56-59, 64, 73-79, 87-89
95-97

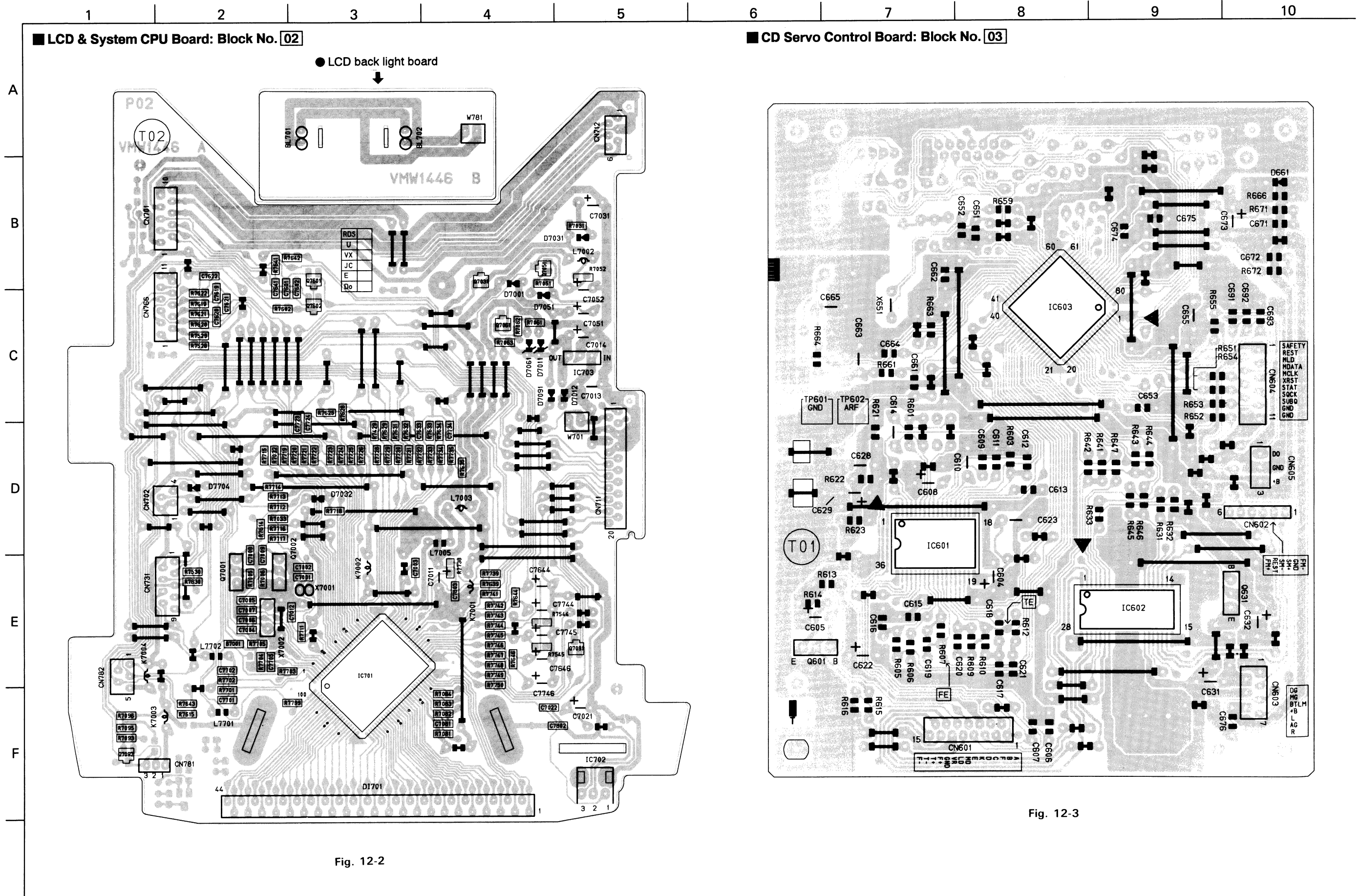
CONDITION	PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
IC1	FM NO SIGNAL	2.0	0.5	0	2.0	5.1	5.1	0	0	0.3	5.1	5.1	1.1	1.1	4.4	3.7	3.7	1.4	0	1.3	1.1	2.0	2.0	5.1	2.0
	FM 80dB STEREO	2.0	0.5	0	2.0	5.1	5.1	1.1	0	0.3	0	0	1.1	1.1	4.3	4.1	3.7	1.4	0	1.4	1.1	2.0	2.0	5.1	2.0
	AM NO SIGNAL	2.0	0.5	0	2.0	5.0	5.1	0	0	0.3	5.1	5.1	1.1	1.1	4.5	0.1	0	1.4	1.4	1.5	1.6	2.0	2.0	5.1	2.0
IC2	FM NO SIGNAL	2.4	0	0	5.1	5.0	5.1	3.7	3.7	2.0	3.8	5.1	0	0	0	0	2.5	5.1	1.0	1.0	3.7	0	2.7		
IC4	FM NO SIGNAL	2.0	2.5	2.5	2.5	5.0	0	2.5	2.5	0	0	0	5.0	2.4	2.4	2.5	2.5								

Tr NO.		Q1			Q6			Q7			Q8			Q14		
PIN NO.		E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
FM 87.5MHz NO SIGNAL		0	7.5	0.7	8.8	8.7	0	1.6	0	1.1	1.6	0	1.1	5.1	5.1	4.5
AM 522kHz NO SIGNAL		0	0	0	8.8	0	8.7	1.6	0	1.1	1.6	0	1.1	5.1	0.1	8.7
Tr NO.		Q2			Q3			Q4								
PIN NO.		E	C	B	E	C	B	E	C	B						
AM 522kHz NO SIGNAL		2.0	2.0	0.1	0	0	0.7	0	0	0.7						
AM 1440kHz NO SIGNAL		2.0	2.0	2.0	0	0	0.1	0	0	0.1						

Fig. 11-5

Fig. 11-5

Fig. 12-1



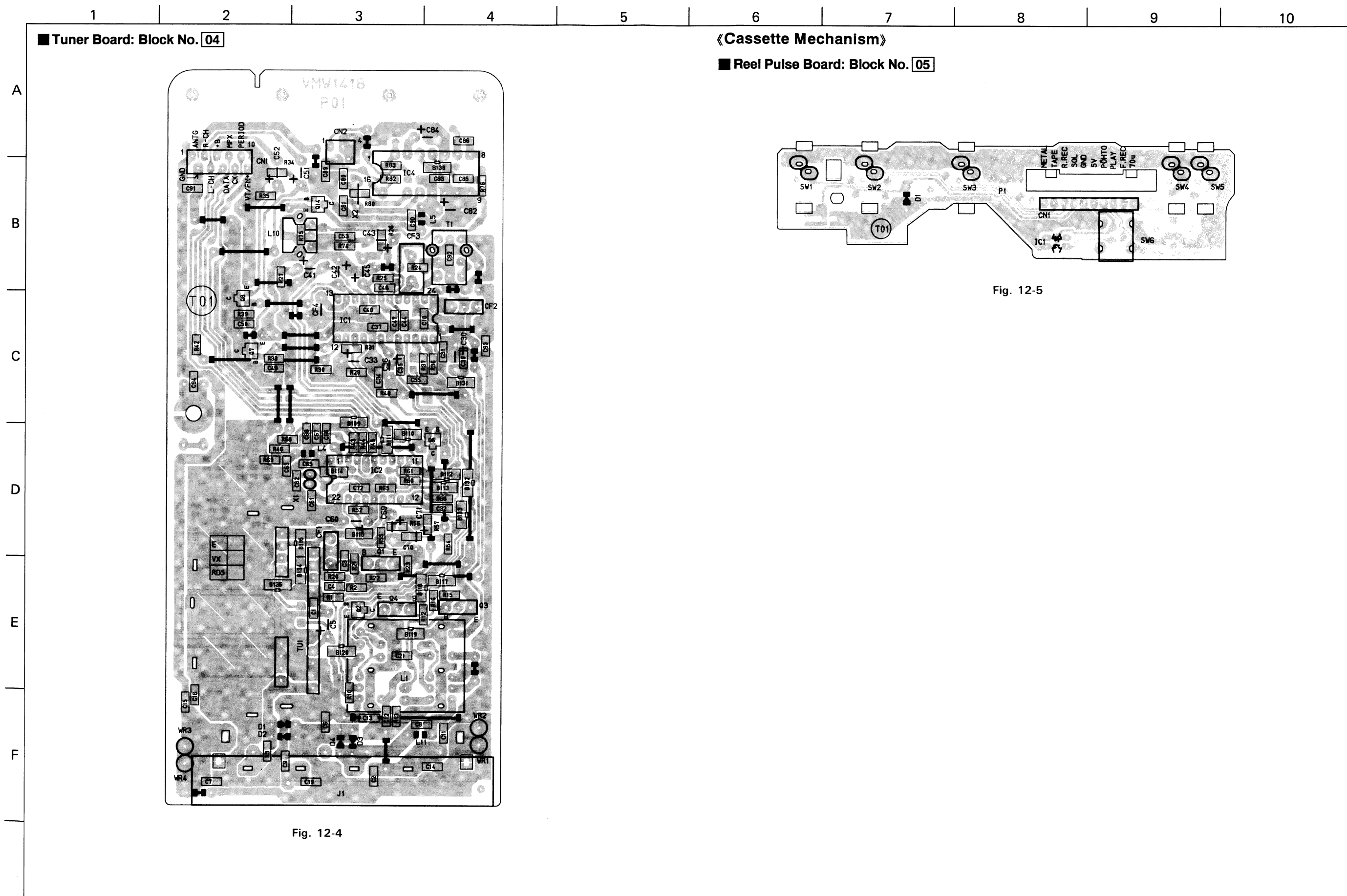




Fig. 12-6

13. Electrical Parts List

Main Board

BLOCK NO. 01					BLOCK NO. 01				
REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
BL701	QLL0020-001	P.LAMP			C2082	QFLC1HJ-563	M.CAPACITOR	.056MF 5% 50V	
BL702	QLL0020-001	P.LAMP			C2083	QFLC1HJ-563	M.CAPACITOR	.056MF 5% 50V	
B7001	NRSA02J-ORONY	MG RESISTOR	5% 1/10W		C2084	QFN41HJ-472	M.CAPACITOR	4700PF 5% 50V	
C 901	QFLC1HJ-104ZM	M.CAPACITOR	.10MF 5% 50V		C3001	VCE101E-688	E.CAPACITOR		
C 902	QFLC1HJ-104ZM	M.CAPACITOR	.10MF 5% 50V		C3002	QFLC1HJ-104ZM	M.CAPACITOR	.10MF 5% 50V	
C 903	QFLC1HJ-104ZM	M.CAPACITOR	.10MF 5% 50V		C3003	QET41CM-107	E.CAPACITOR	100MF 20% 16V	
C 904	QFLC1HJ-104ZM	M.CAPACITOR	.10MF 5% 50V		C3004	QETC1AM-3372N	E.CAPACITOR	330MF 20% 10V	
C301	VMC0314-S20	CONNECTOR			C3005	QETC1AM-3362N	E.CAPACITOR	33MF 20% 10V	
C302	VMC0314-S06	CONNECTOR			C3006	QETC1HM-225ZM	E.CAPACITOR	2.2MF 20% 50V	
C303	VMC0163-010	CONNECTOR			C3010	QETC1HM-684ZM	E.CAPACITOR	.68MF 20% 50V	
C304	VMC0163-007	CONNECTOR			C3011	QCVB1CM-103Y	E.CAPACITOR	.010MF 20% 16V	
C305	VMC0289-S03K	CONNECTOR			C3021	QET41CM-476	E.CAPACITOR	47MF 20% 16V	
C306	VMC0163-R05	CONNECTOR			C3022	QET41AM-476	E.CAPACITOR	47MF 20% 10V	
C307	VMC0040-002	CONNECTOR			C3031	QET41HM-105	E.CAPACITOR	1.0MF 20% 50V	
C1000	QXCB1CM-332Y	C.CAPACITOR	3300PF 20% 16V		C3032	QET41HM-105	E.CAPACITOR	1.0MF 20% 50V	
C1001	QCB81HK-331Y	C.CAPACITOR	330PF 10% 50V		C3033	QFLC1HJ-563	M.CAPACITOR	.056MF 5% 50V	
C1002	QCC11EM-104V	C.CAPACITOR	.10MF 20% 25V		C3034	QFLC1HJ-563	M.CAPACITOR	.056MF 5% 50V	
C1003	QCC11EM-104V	C.CAPACITOR	.10MF 20% 25V		C3035	QET41HM-105	E.CAPACITOR	1.0MF 20% 50V	
C1006	QTE1C03-106Z	E.CAPA. I-M			C3036	QET41CM-106	E.CAPACITOR	10MF 20% 16V	
C1007	QCB81HK-221Y	C.CAPACITOR	220PF 10% 50V		C3037	QET41CM-106	E.CAPACITOR	10MF 20% 16V	
C1010	QCB81HK-221Y	C.CAPACITOR	220PF 10% 50V		C3038	QCB81HK-151Y	C.CAPACITOR	150PF 10% 50V	
C1021	QFN41HJ-823	M.CAPA. I-M	.082MF 5% 50V		C3041	QET41EM-106	E.CAPACITOR	10MF 20% 25V	
C1022	QFN41HJ-823	M.CAPA. I-M	.082MF 5% 50V		C3051	QET41CM-476	E.CAPACITOR	47MF 20% 16V	
C1025	QTEA03-226Z	E.CAPA. I-M			C3052	QET41CM-476	E.CAPACITOR	47MF 20% 16V	
C1026	QFV71HJ-334ZM	FILM CAPACITOR	330MF 5% 50V		C3070	QER41HM-105VM	E.CAPACITOR	1.0MF 20% 50V	
C1041	QCB81HK-102Y	C.CAPACITOR	1000PF 10% 50V		C3081	QET41CM-227	E.CAPACITOR	220MF 20% 16V	
C1050	QCS11HJ-300	C.CAPACITOR	30PF 5% 50V		C3083	QET41HM-474	E.CAPACITOR	.47MF 20% 50V	
C1051	QCS11HJ-100	C.CAPACITOR	10PF 5% 50V		C3084	QET41HM-474	E.CAPACITOR	.47MF 20% 50V	
C1053	QTE1C03-106Z	E.CAPA. I-M			C3085	QET41HM-474	E.CAPACITOR	.47MF 20% 50V	
C1054	QFN81HJ-392	M.CAPA. I-M	3900PF 5% 50V		C3086	QET41EM-106	E.CAPACITOR	10MF 20% 25V	
C1055	QET41EM-475	E.CAPA. I-M	4.7MF 20% 25V		C3087	QETC1HM-224ZM	E.CAPACITOR	.22MF 20% 50V	
C1056	QTE1C03-106Z	E.CAPA. I-M			C3091	QER41HM-105VM	E.CAPACITOR	1.0MF 20% 50V	
C1070	QET41EM-475	E.CAPA. I-M	4.7MF 20% 25V		C7810	NCB21HK-103AY	C.CAPACITOR	.010MF 10% 50V	
C1082	QFLC1HJ-563	M.CAPACITOR	.056MF 5% 50V		C8011	QCVB1CM-103Y	C.CAPACITOR	.010MF 20% 16V	
C1083	QFLC1HJ-563	M.CAPACITOR	.056MF 5% 50V		C8012	QCVB1CM-103Y	C.CAPACITOR	.010MF 20% 16V	
C2000	QFN41HJ-472	M.CAPACITOR	4700PF 5% 50V		C9001	QET41CM-226	E.CAPACITOR	22MF 20% 16V	
C2001	QXCB1CM-332Y	C.CAPACITOR	3300PF 20% 16V		C9003	QCVB1CM-103Y	C.CAPACITOR	.010MF 20% 16V	
C2002	QCC11EM-104V	C.CAPACITOR	330PF 10% 50V		C9004	QCB81HK-221Y	C.CAPACITOR	220PF 10% 50V	
C2003	QCC11EM-104V	C.CAPACITOR	.10MF 20% 25V		C9201	QET41CM-476	E.CAPACITOR	47MF 20% 16V	
C2006	QTE1C03-106Z	E.CAPA. I-M			C9202	QCVB1CM-103Y	C.CAPACITOR	.010MF 20% 16V	
C2007	QCB81HK-221Y	C.CAPACITOR	220PF 10% 50V		C9203	QET41CM-106	E.CAPACITOR	10MF 20% 16V	
C2010	QCB81HK-221Y	C.CAPACITOR	220PF 10% 50V		C9301	QET41AM-107	E.CAPACITOR	100MF 20% 10V	
C2021	QFN41HJ-823	M.CAPA. I-M	.082MF 5% 50V		C9302	QET41HM-475	E.CAPACITOR	4.7MF 20% 50V	
C2022	QFN41HJ-823	M.CAPA. I-M	.082MF 5% 50V		C9501	QET41AM-477	E.CAPACITOR	470MF 20% 10V	
C2025	QTEA03-226Z	E.CAPA. I-M			D 901	6A10E2	SI DIODE		
C2026	QFV71HJ-334ZM	FILM CAPACITOR	.33MF 5% 50V		D 902	6A10E2	SI DIODE		
C2041	QCB81HK-102Y	C.CAPACITOR	1000PF 10% 50V		D 903	6A10E2	SI DIODE		
C2050	QCS11HJ-300	C.CAPACITOR	30PF 5% 50V		D 904	6A10E2	SI DIODE		
C2051	QCS11HJ-100	C.CAPACITOR	10PF 5% 50V		D 905	6A10E2	SI DIODE		
C2053	QTE1C03-106Z	E.CAPA. I-M			D3021	MTZ4.3JB	ZENER DIODE		
C2054	QFN81HJ-392	M.CAPA. I-M	3900PF 5% 50V		D3031	1N4148M-T2	SI DIODE		
C2055	QET41EM-475	E.CAPA. I-M	4.7MF 20% 25V		D3032	1N4148M-T2	SI DIODE		
C2056	QTE1C03-106Z	E.CAPA. I-M			D3033	1N4148M-T2	SI DIODE		
C2070	QET41EM-475	E.CAPA. I-M	4.7MF 20% 25V		D3034	1N4148M-T2	SI DIODE		
					D3070	MTZ6.8JB	ZENER DIODE		

BLOCK NO. 01

A	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
	D3090	MTZ6.8JB	ZENER DIODE	STANDBY LED RED	
	D8101	L-341D-T12	LED		
	D9001	1N4148M-T2	SI DIODE		
	D9002	MTZ8.2JC	ZENER DIODE		
	D9003	MTZ10JAT-77	ZENER DIODE		
	D9201	MTZ4.3JB	ZENER DIODE		
	D9301	MTZ3.9JB	ZENER DIODE		
	D9302	1N4148M-T2	SI DIODE		
	D9303	1N4148M-T2	SI DIODE		
	D9501	1N4148M-T2	SI DIODE		
	IC 31	LA4705NA	IC		
	IC 32	BA15218N	IC		
	IC 35	BA15218N	IC		
	IC 38	BH3852S	IC		
A	J 902	QMA431B-V01	FILM CAPACITOR		
	J5801	QSW0547-001	ROTARY ENCODER		
	J3001	GN0090-001	PIN JACK	KUNMING HSP-242	
	J3002	GNB0035-001	SPK TERMINAL	KUNMIG HSP-324V	
	J3003	VMJ4026-001	HEADPHONE JACK		
	K9401	VQZ0107-002	INDUCTOR		
	L1001	VQP0018-470	INDUCTOR		
	L1002	VQZ0048-007	INDUCTOR		
	L1003	VQZ0104-003	INDUCTOR		
	L2001	VQP0018-470	INDUCTOR		
	L2002	VQZ0048-007	INDUCTOR		
	L2003	VQZ0104-003	INDUCTOR		
	L3001	VQP0018-470	INDUCTOR		
	L3070	VQZ0048-007	INDUCTOR		
	Q1010	2SD2144S(VW)	TRANSISTOR		
	Q1031	KTC3199(GL)-T	TRANSISTOR		
	Q1041	2SC2001(L,K)	TRANSISTOR		
	Q1070	KTC3199(GL)-T	TRANSISTOR		
	Q1090	KTC3199(GL)-T	TRANSISTOR		
	Q2010	2SD2144S(VW)	TRANSISTOR		
	Q2031	KTC3199(GL)-T	TRANSISTOR		
	Q2041	2SC2001(L,K)	TRANSISTOR		
	Q2070	KTC3199(GL)-T	TRANSISTOR		
	Q2090	KTC3199(GL)-T	TRANSISTOR		
	Q3010	KTC3199(GL)-T	TRANSISTOR		
	Q3041	KRA101M-T	TR I/M		
	Q3070	KRA101M-T	TR I/M		
	Q3090	KRA101M-T	TR I/M		
	Q7603	2SC2412KK1	TRANSISTOR		
A	Q9001	2SB1565(E,F)	TR.		
	Q9002	KTC3199(GL)-T	TRANSISTOR		
	Q9003	KTA1267(YG)-T	TRANSISTOR		
	Q9004	KRC114M-T	TRANSISTOR		
	Q9005	DTA144TSTP	TRANSISTOR		
	Q9006	KTC3199(GL)-T	TRANSISTOR		
	Q9007	KTC3199(GL)-T	TRANSISTOR		
A	Q9201	2SA1359(OY)	TRANSISTOR		
	Q9202	KTC3199(GL)-T	TRANSISTOR		
	Q9301	KTA1267(YG)-T	TRANSISTOR		
	Q9302	KTC3199(GL)-T	TRANSISTOR		
	Q9501	2SC2001(L,K)	TRANSISTOR		

BLOCK NO. 01

A	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
	R1001	QRD161J-2R2	CARBON RESISTOR	2.2 5% 1/6W	
	R1002	QRD161J-2R2	CARBON RESISTOR	2.2 5% 1/6W	
	R1003	QRD161J-151	CARBON RESISTOR	150 5% 1/6W	
	R1004	QRD161J-471	CARBON RESISTOR	470 5% 1/6W	
	R1010	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
	R1011	QRD161J-224	CARBON RESISTOR	220K 5% 1/6W	
	R1012	QRD161J-623	CARBON RESISTOR	62K 5% 1/6W	
	R1013	QRD161J-153	CARBON RESISTOR	15K 5% 1/6W	
	R1014	QRD161J-272	CARBON RESISTOR	2.7K 5% 1/6W	
	R1015	QRD161J-153	CARBON RESISTOR	15K 5% 1/6W	
	R1022	QRD161J-224	CARBON RESISTOR	220K 5% 1/6W	
	R1023	QRD161J-182	CARBON RESISTOR	1.8K 5% 1/6W	
	R1024	QRD161J-202	CARBON RESISTOR	2.0K 5% 1/6W	
	R1026	QRD161J-153	CARBON RESISTOR	15K 5% 1/6W	
	R1027	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
	R1028	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
	R1029	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
	R1031	QRD161J-223	CARBON RESISTOR	22K 5% 1/6W	
	R1032	QRD161J-223	CARBON RESISTOR	22K 5% 1/6W	
	R1033	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
	R1041	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
	R1051	QRD161J-154	CARBON RESISTOR	150K 5% 1/6W	
	R1052	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
	R1054	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
	R1055	QRD161J-332	CARBON RESISTOR	3.3K 5% 1/6W	
	R1056	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
	R1057	QRD161J-124	CARBON RESISTOR	120K 5% 1/6W	
	R1070	QRD161J-183	CARBON RESISTOR	18K 5% 1/6W	
	R1071	QRD161J-153	CARBON RESISTOR	15K 5% 1/6W	
	R1072	QRD161J-272	CARBON RESISTOR	2.7K 5% 1/6W	
	R1073	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
	R1074	QRD161J-152	CARBON RESISTOR	1.5K 5% 1/6W	
	R1082	QRD161J-302	CARBON RESISTOR	3.0K 5% 1/6W	
	R1083	QRD161J-182	CARBON RESISTOR	1.8K 5% 1/6W	
	R1090	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
	R1091	QRD161J-223	CARBON RESISTOR	22K 5% 1/6W	
	R1092	QRD161J-392	CARBON RESISTOR	3.9K 5% 1/6W	
	R2001	QRD161J-2R2	CARBON RESISTOR	2.2 5% 1/6W	
	R2002	QRD161J-2R2	CARBON RESISTOR	2.2 5% 1/6W	
	R2003	QRD161J-151	CARBON RESISTOR	150 5% 1/6W	
	R2004	QRD161J-471	CARBON RESISTOR	470 5% 1/6W	
	R2010	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
	R2011	QRD161J-224	CARBON RESISTOR	220K 5% 1/6W	
	R2012	QRD161J-623	CARBON RESISTOR	62K 5% 1/6W	
	R2013	QRD161J-153	CARBON RESISTOR	15K 5% 1/6W	
	R2014	QRD161J-272	CARBON RESISTOR	2.7K 5% 1/6W	
	R2015	QRD161J-153	CARBON RESISTOR	15K 5% 1/6W	
	R2022	QRD161J-224	CARBON RESISTOR	220K 5% 1/6W	
	R2023	QRD161J-182	CARBON RESISTOR	1.8K 5% 1/6W	
	R2024	QRD161J-202	CARBON RESISTOR	2.0K 5% 1/6W	
	R2026	QRD161J-153	CARBON RESISTOR	15K 5% 1/6W	
	R2027	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
	R2028	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
	R2029	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
	R2031	QRD161J-223	CARBON RESISTOR	22K 5% 1/6W	

BLOCK NO. 01111111				
REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
R2032	QRD161J-223	CARBON RESISTOR	22K 5% 1/6W	
R2033	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R2041	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
R2051	QRD161J-154	CARBON RESISTOR	150K 5% 1/6W	
R2052	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
R2054	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
R2055	QRD167J-332	CARBON RESISTOR	3.3K 5% 1/6W	
R2056	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R2057	QRD161J-124	CARBON RESISTOR	120K 5% 1/6W	
R2070	QRD161J-183	CARBON RESISTOR	18K 5% 1/6W	
R2071	QRD161J-153	CARBON RESISTOR	15K 5% 1/6W	
R2072	QRD161J-272	CARBON RESISTOR	2.7K 5% 1/6W	
R2073	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
R2074	QRD161J-152	CARBON RESISTOR	1.5K 5% 1/6W	
R2082	QRD161J-302	CARBON RESISTOR	3.0K 5% 1/6W	
R2083	QRD161J-182	CARBON RESISTOR	1.8K 5% 1/6W	
R2090	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R2091	QRD161J-223	CARBON RESISTOR	22K 5% 1/6W	
R2092	QRD161J-392	CARBON RESISTOR	3.9K 5% 1/6W	
R3001	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R3010	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R3021	QRD161J-101	CARBON RESISTOR	100 5% 1/6W	
R3022	QRD161J-152	CARBON RESISTOR	1.5K 5% 1/6W	
R3031	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
R3032	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
R3033	QRD161J-124	CARBON RESISTOR	120K 5% 1/6W	
R3034	QRD161J-154	CARBON RESISTOR	150K 5% 1/6W	
R3035	QRD161J-223	CARBON RESISTOR	22K 5% 1/6W	
R3036	QRD161J-513	CARBON RESISTOR	51K 5% 1/6W	
R3051	QRD161J-101	CARBON RESISTOR	100 5% 1/6W	
R3052	QRD161J-473	CARBON RESISTOR	47K 5% 1/6W	
R3053	QRD161J-473	CARBON RESISTOR	47K 5% 1/6W	
R3081	QRD161J-101	CARBON RESISTOR	100 5% 1/6W	
R3082	QRD161J-124	CARBON RESISTOR	120K 5% 1/6W	
R3083	QRD161J-154	CARBON RESISTOR	150K 5% 1/6W	
R3084	QRD161J-124	CARBON RESISTOR	120K 5% 1/6W	
R3090	QRD161J-223	CARBON RESISTOR	22K 5% 1/6W	
R7647	NRS02J-104NY	MG RESISTOR	100K 5% 1/10W	
R7648	NRS02J-394NY	MG RESISTOR	390K 5% 1/10W	
R7649	NRS02J-823NY	MG RESISTOR	82K 5% 1/10W	
R8001	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
R8002	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
R8003	QRD161J-122	CARBON RESISTOR	1.2K 5% 1/6W	
R8005	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R8011	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
R8012	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
R8013	QRD161J-122	CARBON RESISTOR	1.2K 5% 1/6W	
R8014	QRD161J-152	CARBON RESISTOR	1.5K 5% 1/6W	
R8015	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
R8016	QRD161J-272	CARBON RESISTOR	2.7K 5% 1/6W	
R8017	QRD161J-392	CARBON RESISTOR	3.9K 5% 1/6W	
R8018	QRD167J-562	CARBON RESISTOR	5.6K 5% 1/6W	
R8019	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R8101	QRD161J-271	CARBON RESISTOR	270 5% 1/6W	
R9001	QRD161J-1R0	CARBON RESISTOR	1.0 5% 1/6W	

BLOCK NO. 01111111				
REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
R9002	QRD161J-1R0	CARBON RESISTOR	1.0 5% 1/6W	
R9003	QRD161J-1R0	CARBON RESISTOR	1.0 5% 1/6W	
R9004	QRD161J-471	CARBON RESISTOR	470 5% 1/6W	
R9005	QRD161J-152	CARBON RESISTOR	1.5K 5% 1/6W	
R9006	QRD161J-282	CARBON RESISTOR	2.4K 5% 1/6W	
R9007	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
R9008	QRD167J-682	CARBON RESISTOR	6.8K 5% 1/6W	
R9009	QRD161J-331	CARBON RESISTOR	330 5% 1/6W	
R9010	QRD161J-331	CARBON RESISTOR	330 5% 1/6W	
R9011	QRD161J-331	CARBON RESISTOR	330 5% 1/6W	
R9012	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
R9013	QRD161J-471	CARBON RESISTOR	470 5% 1/6W	
R9014	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
R9015	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
R9016	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
R9017	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
R9018	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R9019	QRD161J-391	CARBON RESISTOR	390 5% 1/6W	
R9021	QRD161J-331	CARBON RESISTOR	330 5% 1/6W	
R9102	QR2007-5R6X	F.RES.1.M	5.6 1/10W	
R9201	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R9202	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R9203	QRD161J-221	CARBON RESISTOR	220 5% 1/6W	
R9301	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
R9302	QRD161J-333	CARBON RESISTOR	33K 5% 1/6W	
R9303	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
R9304	QRD161J-390	CARBON RESISTOR	39 5% 1/6W	
R9401	QR2007-4R7X	FUSE RESISTOR	4.7 1/10W	
R9501	QRD161J-221	CARBON RESISTOR	220 5% 1/6W	
S8001	QS04H11-V12Z	TACT SW	POWER	
S8002	QS04H11-V12Z	TACT SW	AUX	
S8003	QS04H11-V12Z	TACT SW	VOLUME+	
S8004	QS04H11-V12Z	TACT SW	VOLUME-	
S8011	QS04H11-V12Z	TACT SW	TUNER	
S8012	QS04H11-V12Z	TACT SW	UP	
S8013	QS04H11-V12Z	TACT SW	STOP	
S8014	QS04H11-V12Z	TACT SW	TAPE	
S8015	QS04H11-V12Z	TACT SW	CD	
S8016	QS04H11-V12Z	TACT SW	DOWN	
S8017	QS04H11-V12Z	TACT SW	CLOCK	
S8018	QS04H11-V12Z	TACT SW	REC	
S8019	QS04H11-V12Z	TACT SW	SBASS	
S8020	QS04H11-V12Z	TACT SW	SMOOSE	
S8061	QSP2K21-V01	PUSH SWITCH	CD DOOR	
Z 901	EMG7331-003Z	FUSE CLIP		
Z 903	EMG7331-003Z	FUSE CLIP		
Z 911	EMG7331-003Z	FUSE CLIP		
Z 913	EMG7331-003Z	FUSE CLIP		

LCD & System CPU Board

BLOCK NO. 02					
A	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
	B7102	NRS181J-OR0NY	MG RESISTOR	5% 1/8W	
	B7103	NRS181J-OR0NY	MG RESISTOR	5% 1/8W	
	B7104	NRS181J-OR0NY	MG RESISTOR	5% 1/8W	
	CN701	VMC0163-R10	CONNECTOR	TO TUNER PWB	
	CN702	VMC0163-R04	CONNECTOR	TO TUNER PWB RD	
	CN711	VMC0314-P20	CONNECTOR	TO AMP PWB CONT	
	CN712	VMC0314-P06	CONNECTOR	TO AMP PWB SIG.	
	CN731	VMC0163-009	CONNECTOR	TO MECHA PWB	
	CN766	VMC0163-R11	CONNECTOR	TO CD PWB	
	CN781	VMC0289-P03	CONNECTOR	TO FRONT SW PWB	
	CN782	VMC0163-005	CONNECTOR	TO TOP SW PWB	
	C7001	NCS21HJ-180AY	C CAPACITOR	CLOCK	
	C7002	NCS21HJ-180AY	C CAPACITOR	CLOCK	
	C7003	NCB21HK-102AY	C CAPACITOR	1000PF 10% 50V	
	C7004	NCS21HJ-360AY	C CAPACITOR	MAIN CLOCK SHIF	
	C7005	NCS21HJ-390AY	C CAPACITOR	MAIN CLOCK SHIF	
	C7006	NCS21HJ-200AY	C CAPACITOR	MAIN CLOCK	
	C7007	NCS21HJ-220AY	C CAPACITOR	MAIN CLOCK	
	C7008	NCB21HK-102AY	C CAPACITOR	1000PF 10% 50V	
	C7009	NCB21HK-102AY	C CAPACITOR	1000PF 10% 50V	
	C7011	GER41M-107	E.CAPACITOR	100MF 20% 10V	
	C7012	NCB21HK-103AY	C CAPACITOR	-010MF 10% 50V	
	C7013	QFLC1HJ-104ZM	M.CAPACITOR	-10MF 5% 50V	
	C7014	GER41CM-106	E.CAPACITOR	10MF 20% 16V	
	C7021	GER41CM-476M	E.CAPACITOR	47MF 20% 16V	
	C7022	NCB21HK-102AY	C CAPACITOR	1000PF 10% 50V	
	C7031	QETB0JM-228N	E CAPACITOR	BACKUP CAPACITO	
	C7051	GER61HM-684ZM	E.CAPA I.M	.68MF 20% 50V	
	C7052	GER41HM-225	E.CAPACITOR	2.2MF 20% 50V	
	C7081	NCB21HK-104	C CAPACITOR	AM LCD NOISE	
	C7601	NCS21HJ-151AY	C CAPACITOR	150PF 5% 50V	
	C7602	NCS21HJ-151AY	C CAPACITOR	150PF 5% 50V	
	C7619	NCS21HJ-271AY	C CAPACITOR	270PF 5% 50V	
	C7620	NCS21HJ-271AY	C CAPACITOR	270PF 5% 50V	
	C7621	NCS21HJ-271AY	C CAPACITOR	270PF 5% 50V	
	C7622	NCS21HJ-271AY	C CAPACITOR	270PF 5% 50V	
	C7633	NCB21HK-102AY	C CAPACITOR	1000PF 10% 50V	
	C7641	NCS21HJ-151AY	E.CAPACITOR	150PF 5% 50V	
	C7644	GER41HM-105VM	E.CAPACITOR	1.0MF 20% 50V	
	C7646	GER41HM-105VM	E.CAPACITOR	1.0MF 20% 50V	
	C7701	NCS21HJ-151AY	C CAPACITOR	150PF 5% 50V	
	C7702	NCS21HJ-151AY	C CAPACITOR	150PF 5% 50V	
	C7705	NCS21HJ-331AY	C CAPACITOR	330PF 5% 50V	
	C7723	NCB21HK-102AY	C CAPACITOR	1000PF 10% 50V	
	C7724	NCB21HK-102AY	C CAPACITOR	1000PF 10% 50V	
	C7734	NCB21HK-102AY	C CAPACITOR	1000PF 10% 50V	
	C7744	GER41HM-225	E.CAPACITOR	2.2MF 20% 50V	
	C7745	GER61HM-335ZM	E.CAPACITOR	3.3MF 20% 50V	
	C7746	GER41HM-225	E.CAPACITOR	2.2MF 20% 50V	
	C7802	NCB21HK-103AY	C CAPACITOR	MICOM NOISE	
	C7803	NCB21HK-102AY	C CAPACITOR	1000PF 10% 50V	
	D1701	VGL1221-002	LCD	44PIN	
	D7001	1N4148M-T2	SI DIODE	US5V	
	D7011	MTZ8.2JB	ZENER DIODE	SHORT HOGO	
A	D7012	1N4148M-T2	SI DIODE	SHORT HOGO	

BLOCK NO. 02					
A	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
	D7031	1N4148M-T2	SI DIODE	BUCKUP	
	D7032	1N4148M-T2	SI DIODE	CLOCK	
	D7031	1N4148M-T2	SI DIODE	RESET	
	D7061	MTZ5.1JC	ZENER DIODE	BUCKUP CONT.	
	D7091	1N4148M-T2	SI DIODE	US5V	
	D7703	1N4148M-T2	SI DIODE	SUBQ RDS ONLY	
	D7704	1N4148M-T2	SI DIODE	SUBQ RDS ONLY	
	IC701	UPD78064GF-097	IC	SYSTEM MICON	
	IC702	PIC-21043SP	REMOKON SENSOR		
A	IC703	KIA78506P-T	IC	US4V REG	
	K7001	VQZ0107-002	INDUCTOR	ICVSS	
	K7002	VQZ0107-002	INDUCTOR	AVSS	
	K7003	VQZ0107-002	INDUCTOR		
	K7004	VQZ0107-002	INDUCTOR		
	L7002	VQP0033-100Z	INDUCTOR	US5V	
	L7003	VQP0033-100Z	INDUCTOR	AVDD	
	L7005	VQP0018-4R7	INDUCTOR	AVREF	
	L7701	VQP0018-4R7	INDUCTOR		
	L7702	VQP0018-4R7	INDUCTOR		
	Q7001	25C2668(O)	TRANSISTOR	CLOCK SHIFT	
	Q7002	25C2668(O)	TRANSISTOR	CLOCK SHIFT	
	Q7031	2SA1037AK(RS)-X	CHIP TR.C.M	SW5V	
	Q7051	DTIC114TKT146	TRANSISTOR	RESET SW	
	Q7061	25C2412KK1	TRANSISTOR	BACKUP CONT	
	Q7091	25C2412KK1	TRANSISTOR	POUT DRIVER	
	Q7092	2SA1037AK(RS)-X	CHIP TR.C.M	STANDBY LED CON	
	Q7601	DTIC144TKA-X	TRANSISTOR		
	Q7602	DTIC144TKA-X	TRANSISTOR		
	R7005	NRSA02J-822NY	MG RESISTOR	8.2K 5% 1/10W	
	R7006	NRSA02J-822NY	MG RESISTOR	8.2K 5% 1/10W	
	R7031	NRSA02J-331NY	MG RESISTOR	330 5% 1/10W	
	R7032	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
	R7033	NRSA02J-102NY	MG RESISTOR	1.0K 5% 1/10W	
	R7051	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
	R7052	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
	R7061	NRSA02J-333NY	MG RESISTOR	33K 5% 1/10W	
	R7062	NRSA02J-473NY	MG RESISTOR	47K 5% 1/10W	
	R7063	NRSA02J-104NY	MG RESISTOR	100K 5% 1/10W	
	R7081	NRSA02J-104NY	MG RESISTOR	100K 5% 1/10W	
	R7082	NRSA02J-104NY	MG RESISTOR	100K 5% 1/10W	
	R7083	NRSA02J-104NY	MG RESISTOR	100K 5% 1/10W	
	R7084	NRSA02J-273NY	MG RESISTOR	27K 5% 1/10W	
	R7093	NRSA02J-153NY	MG RESISTOR	STANDBY LED CON	
	R7095	NRSA02J-333NY	MG RESISTOR	STANDBY LED CON	
	R7096	NRSA02J-102NY	MG RESISTOR	STANDBY LED CON	
	R7429	NRSA02J-913NY	RES. C.M	91K 5% 1/10W	
	R7528	NRSA02J-223NY	MG RESISTOR	22K 5% 1/10W	
	R7529	NRSA02J-473NY	MG RESISTOR	47K 5% 1/10W	
	R7530	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
	R7544	NRSA02J-114NYM	RES. C.M	110K 5% 1/10W	
	R7545	NRSA02J-114NYM	RES. C.M	110K 5% 1/10W	
	R7602	NRSA02J-102NY	MG RESISTOR	1.0K 5% 1/10W	
	R7603	NRSA02J-103NY	MG RESISTOR	RDS ONLY	
	R7615	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
	R7619	NRSA02J-122NY	MG RESISTOR	1.2K 5% 1/10W	

BLOCK NO. 02		BLOCK NO. 02	
REF.	PARTS NO.	PARTS NAME	SUFFIX
R7620	NRSA02J-102NY	MG RESISTOR	1.0K 5% 1/10W
R7621	NRSA02J-122NY	MG RESISTOR	1.2K 5% 1/10W
R7622	NRSA02J-102NY	MG RESISTOR	1.0K 5% 1/10W
R7625	NRSA02J-823NY	MG RESISTOR	82K 5% 1/10W
R7628	NRSA02J-823NY	MG RESISTOR	82K 5% 1/10W
R7629	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W
R7630	NRSA02J-563NY	MG RESISTOR	56K 5% 1/10W
R7631	NRSA02J-104NY	MG RESISTOR	100K 5% 1/10W
R7632	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W
R7633	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W
R7634	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W
R7635	NRSA02J-104NY	MG RESISTOR	100K 5% 1/10W
R7639	NRSA02J-222NY	MG RESISTOR	2.2K 5% 1/10W
R7641	NRSA02J-102NY	MG RESISTOR	1.0K 5% 1/10W
R7642	NRSA02J-102NY	MG RESISTOR	1.0K 5% 1/10W
R7643	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W
R7644	NRSA02J-683NY	MG RESISTOR	68K 5% 1/10W
R7646	NRSA02J-683NY	MG RESISTOR	68K 5% 1/10W
R7701	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W
R7702	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W
R7703	NRSA02J-102NY	MG RESISTOR	1.0K 5% 1/10W
R7704	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W
R7705	NRSA02J-102NY	MG RESISTOR	1.0K 5% 1/10W
R7711	NRSA02J-222NY	MG RESISTOR	2.2K 5% 1/10W
R7712	NRSA02J-102NY	MG RESISTOR	1.0K 5% 1/10W
R7713	NRSA02J-222NY	MG RESISTOR	2.2K 5% 1/10W
R7714	NRSA02J-102NY	MG RESISTOR	10K 5% 1/10W
R7715	NRSA02J-222NY	MG RESISTOR	2.2K 5% 1/10W
R7716	NRSA02J-472NY	MG RESISTOR	4.7K 5% 1/10W
R7717	NRSA02J-472NY	MG RESISTOR	4.7K 5% 1/10W
R7718	NRSA02J-222NY	MG RESISTOR	2.2K 5% 1/10W
R7719	NRSA02J-102NY	MG RESISTOR	1.0K 5% 1/10W
R7720	NRSA02J-102NY	MG RESISTOR	1.0K 5% 1/10W
R7721	NRSA02J-102NY	MG RESISTOR	1.0K 5% 1/10W
R7722	NRSA02J-102NY	MG RESISTOR	1.0K 5% 1/10W
R7723	NRSA02J-222NY	MG RESISTOR	2.2K 5% 1/10W
R7724	NRSA02J-222NY	MG RESISTOR	2.2K 5% 1/10W
R7725	NRSA02J-222NY	MG RESISTOR	2.2K 5% 1/10W
R7726	NRSA02J-222NY	MG RESISTOR	2.2K 5% 1/10W
R7728	NRSA02J-222NY	MG RESISTOR	2.2K 5% 1/10W
R7729	NRSA02J-222NY	MG RESISTOR	2.2K 5% 1/10W
R7730	NRSA02J-222NY	MG RESISTOR	2.2K 5% 1/10W
R7731	NRSA02J-222NY	MG RESISTOR	2.2K 5% 1/10W
R7732	NRSA02J-222NY	MG RESISTOR	2.2K 5% 1/10W
R7733	NRSA02J-222NY	MG RESISTOR	2.2K 5% 1/10W
R7734	NRSA02J-222NY	MG RESISTOR	2.2K 5% 1/10W
R7735	NRSA02J-222NY	MG RESISTOR	2.2K 5% 1/10W
R7738	NRSA02J-222NY	MG RESISTOR	2.2K 5% 1/10W
R7739	NRSA02J-222NY	MG RESISTOR	2.2K 5% 1/10W
R7741	NRSA02J-222NY	MG RESISTOR	2.2K 5% 1/10W
R7742	NRSA02J-222NY	MG RESISTOR	2.2K 5% 1/10W
R7743	NRSA02J-222NY	MG RESISTOR	2.2K 5% 1/10W
R7744	NRSA02J-563NY	MG RESISTOR	56K 5% 1/10W
R7745	NRSA02J-473NY	MG RESISTOR	47K 5% 1/10W
R7746	NRSA02J-333NY	MG RESISTOR	33K 5% 1/10W

BLOCK NO. 02		BLOCK NO. 02	
REF.	PARTS NO.	PARTS NAME	SUFFIX
R7747	NRSA02J-222NY	MG RESISTOR	2.2K 5% 1/10W
R7748	NRSA02J-153NY	MG RESISTOR	15K 5% 1/10W
R7749	NRSA02J-123NY	MG RESISTOR	12K 5% 1/10W
R7750	NRSA02J-222NY	MG RESISTOR	2.2K 5% 1/10W
R7799	NRSA02J-102NY	MG RESISTOR	1.0K 5% 1/10W
X7001	VCX5000-002	CRYSTAL	CLOCK
X7002	M274.19	CERA LOCK	MAIN CLOCK

CD Servo Control Board

BLOCK NO. 03

BLOCK NO. 03

REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
C 604	QK51AM-107	E CAPACITOR	100MF 20% 10V	
C 605	QET41EM-106	E CAPACITOR	10MF 20% 25V	
C 606	QCB81HK-102Y	C CAPACITOR	1000PF 10% 50V	
C 607	QCB81HK-102Y	C CAPACITOR	1000PF 10% 50V	
C 608	QET41HM-105	E CAPACITOR	1.0MF 20% 50V	
C 609	QCB81HK-101Y	C CAPACITOR	100PF 10% 50V	
C 610	QFLC1HJ-273ZM	M CAPACITOR	.027MF 5% 50V	
C 611	QCB81CM-222Y	C CAPACITOR	2200PF 20% 16V	
C 612	QCB81CM-103Y	C CAPACITOR	.010MF 20% 16V	
C 613	QCB81HK-331Y	C CAPACITOR	330PF 10% 50V	
C 614	QFLC1HJ-104ZM	M CAPACITOR	.10MF 5% 50V	
C 615	QCB81EZ-223	C CAPACITOR	.022MF +80:-20%	
C 616	QCB81EZ-223	C CAPACITOR	.022MF +80:-20%	
C 617	QCB81EZ-223	C CAPACITOR	.022MF +80:-20%	
C 618	QCB81CM-222Y	C CAPACITOR	2200PF 20% 16V	
C 619	QCB81HK-271Y	C CAPACITOR	270PF 10% 50V	
C 620	QCS11HJ-470	C CAPACITOR	47PF 5% 50V	
C 621	QCB81HK-821Y	C CAPACITOR	820PF 10% 50V	
C 622	QET41AM-476	E CAPACITOR	47MF 20% 10V	
C 623	QFLC1HJ-104ZM	M CAPACITOR	.10MF 5% 50V	
C 628	QCC11EM-473V	C CAPACITOR	.047MF 20% 25V	
C 629	QET41AM-107	E CAPACITOR	100MF 20% 10V	
C 630	QET41AM-477	E CAPACITOR	470MF 20% 10V	
C 631	QK51AM-107	E CAPACITOR	100MF 20% 10V	
C 632	QCS11HJ-120	C CAPACITOR	12PF 5% 50V	
C 633	QCS11HJ-150	C CAPACITOR	15PF 5% 50V	
C 634	QCB81EZ-223	C CAPACITOR	.022MF +80:-20%	
C 635	QCC11EM-473V	C CAPACITOR	.047MF 20% 25V	
C 636	QCB81HK-471Y	C CAPACITOR	470PF 10% 50V	
C 637	QCB81EZ-223	C CAPACITOR	.022MF +80:-20%	
C 638	QFLC1HJ-223ZM	M CAPACITOR	.022MF 5% 50V	
C 639	QCB81EZ-223	C CAPACITOR	.022MF +80:-20%	
C 640	QFV71HJ-334ZM	FILM CAPACITOR	.33MF 5% 50V	
C 641	QCB81CM-152Y	C CAPACITOR	1500PF 20% 16V	
C 642	QCB81CM-152Y	C CAPACITOR	1500PF 20% 16V	
C 643	QTE1C05-227	E CAPACITOR	.022MF +80:-20%	
C 644	QCB81EZ-223	C CAPACITOR	.022MF +80:-20%	
C 645	QCB81HK-102Y	C CAPACITOR	AG-DG	
C 646	QCB81HK-102Y	C CAPACITOR	AG-DG	
C 647	QCB81HK-151Y	C CAPACITOR	DENGEN NOISE	
C 648	QCB81HK-151Y	C CAPACITOR	DENGEN NOISE	
C 649	QCB81HK-151Y	C CAPACITOR	DENGEN NOISE	
C 650	QCB81HK-151Y	C CAPACITOR	DENGEN NOISE	
C 651	QGF1008F1-15	15PIN CONNECTOR	TO RF	
C 652	VMC0163-R07	CONNECTOR	TO AUDIO	
C 653	VMC0163-R11	CONNECTOR	TO MICRON	
C 654	VMC0041-003	CONNECTOR	TO DIGITAL OUT	
C 655	1SS133	SI DIODE		
C 656	AN806SB	IC	RF AMP	
C 657	BA6897FP	IC	DRIVER	
C 658	MN35510	IC	1CHIP PROCESSOR	
Q 601	2SA952(L-K)	TRANSISTOR		
Q 602	2SA952(L-K)	TRANSISTOR		
R 601	QRD161J-123	CARBON RESISTOR	12K 5% 1/6W	
R 602	QRD161J-123	CARBON RESISTOR	1.2M 5% 1/6W	
R 603	QRD161J-125	CARBON RESISTOR	130K 5% 1/6W	
R 604	QRD161J-134	C RESISTOR		

REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
R 606	QRD161J-913	CARBON RESISTOR	91K 5% 1/6W	
R 607	QRD161J-273	CARBON RESISTOR	27K 5% 1/6W	
R 608	QRD161J-114	C-RESISTOR	110K 5% 1/6W	
R 609	QRD161J-154	CARBON RESISTOR	150K 5% 1/6W	
R 610	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R 611	QRD161J-121	CARBON RESISTOR	120 5% 1/6W	
R 612	QRD161J-100	CARBON RESISTOR	10 5% 1/6W	
R 613	QRD161J-120	CARBON RESISTOR	12 5% 1/6W	
R 614	QRD161J-910Y	CARBON RESISTOR	91 5% 1/6W	
R 615	QRD161J-330	CARBON RESISTOR	33 5% 1/6W	
R 616	QRD161J-330	CARBON RESISTOR	33 5% 1/6W	
R 617	QRD161J-331	CARBON RESISTOR	330 5% 1/6W	
R 618	QRD161J-101	CARBON RESISTOR	100 5% 1/6W	
R 619	QRD161J-273	CARBON RESISTOR	27K 5% 1/6W	
R 620	QRD161J-563	CARBON RESISTOR	56K 5% 1/6W	
R 621	QRD161J-123	CARBON RESISTOR	12K 5% 1/6W	
R 622	QRD161J-822	CARBON RESISTOR	8.2K 5% 1/6W	
R 623	QRD161J-223	CARBON RESISTOR	22K 5% 1/6W	
R 624	QRD161J-223	CARBON RESISTOR	22K 5% 1/6W	
R 625	QRD161J-182	CARBON RESISTOR	1.8K 5% 1/6W	
R 626	QRD161J-562	CARBON RESISTOR	5.6K 5% 1/6W	
R 627	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
R 628	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
R 629	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
R 630	QRD161J-471	CARBON RESISTOR	470 5% 1/6W	
R 631	QRD161J-104	CARBON RESISTOR	100K 5% 1/6W	
R 632	QRD161J-124	CARBON RESISTOR	120K 5% 1/6W	
R 633	QRD161J-681	CARBON RESISTOR	680 5% 1/6W	
R 634	QRD161J-220	CARBON RESISTOR	22 5% 1/6W	
R 635	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
R 636	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
R 637	VCX5016-934V	CRYSTAL	16.9344MHZ	

Tuner Board

BLOCK NO. 04				
A	REF.	PARTS NO.	PARTS NAME	REMARKS
C	1	NCB21HK-223AY	C CAPACITOR	.022MF 10% 50V
C	2	NCB21HK-103AY	C CAPACITOR	.010MF 10% 50V
C	3	NCB21HK-473AY	C CAPACITOR	.047MF 10% 25V
C	4	NCB21HK-103AY	C CAPACITOR	.010MF 10% 50V
C	5	0EK41CM-106	E CAPACITOR	10MF 20% 16V
C	6	NCB21HK-102AY	C CAPACITOR	1000PF 10% 50V
C	7	NCB21HK-102AY	C CAPACITOR	1000PF 5% 50V
C	8	NCB21HJ-150AY	C CAPACITOR	15PF 5% 50V
C	9	NCB21HK-102AY	C CAPACITOR	1000PF 10% 50V
C	11	NCB21HK-103AY	C CAPACITOR	.010MF 10% 50V
C	12	NCB21HK-150AY	C CAPACITOR	15PF +50% -10% 1
C	13	NCB21HK-473AY	C CAPACITOR	.047MF 10% 25V
C	14	NCB21HK-103AY	C CAPACITOR	.010MF 10% 50V
C	15	NCB21HK-102AY	C CAPACITOR	1000PF 10% 50V
C	16	NCB21HK-102AY	C CAPACITOR	1000PF 10% 50V
C	18	NCB21HK-103AY	C CAPACITOR	.010MF 10% 50V
C	19	NCB21HK-122AY	C CAPACITOR	1200PF 10% 50V
C	21	NCB21HK-473AY	C CAPACITOR	.047MF 10% 25V
C	30	0EK41CM-476	E CAPACITOR	47MF 20% 16V
C	31	NCB21HJ-390AY	C CAPACITOR	39PF 5% 50V
C	32	NCB21HK-102AY	C CAPACITOR	1000PF 10% 50V
C	33	0EK61AM-1072	E CAPACITOR	100MF 20% 10V
C	34	NCB21HJ-150AY	C CAPACITOR	15PF 5% 50V
C	35	NCB21HK-102AY	C CAPACITOR	1000PF 10% 50V
C	36	0EK41CM-106	E CAPACITOR	10MF 20% 16V
C	37	NCB21HK-473AY	C CAPACITOR	.047MF 10% 25V
C	39	NCB21HK-473AY	C CAPACITOR	.047MF 10% 25V
C	40	NCB21HK-103AY	C CAPACITOR	.010MF 10% 50V
C	41	0EK41HM-104	E CAPACITOR	.10MF 20% 50V
C	42	0EK41HM-474	E CAPACITOR	.47MF 20% 50V
C	43	0EK61HM-3352N	E CAPACITOR	3.3MF 20% 50V
C	44	NCB21HJ-221AY	C CAPACITOR	220PF 5% 50V
C	45	0EK41CM-106	E CAPACITOR	10MF 20% 16V
C	46	NCB21HK-223AY	C CAPACITOR	.022MF 10% 50V
C	47	NCB21HK-103AY	C CAPACITOR	.010MF 10% 50V
C	49	NCB21HK-183AY	C CAPACITOR	.018MF 10% 50V
C	50	NCB21HK-183AY	C CAPACITOR	.018MF 10% 50V
C	51	0EK41HM-105	E CAPACITOR	1.0MF 20% 50V
C	52	0EK41HM-105	E CAPACITOR	1.0MF 20% 50V
C	53	NCB21HK-681AY	C CAPACITOR	680PF 10% 50V
C	55	NCB21HJ-120AY	C CAPACITOR	12PF 5% 50V
C	60	0EK61AM-1072	E CAPACITOR	100MF 20% 10V
C	61	NCB21HJ-120AY	C CAPACITOR	12PF 5% 50V
C	62	NCB21HJ-120AY	C CAPACITOR	12PF 5% 50V
C	63	NCB21HK-473AY	C CAPACITOR	.047MF 10% 25V
C	65	NCB21HK-102AY	C CAPACITOR	1000PF 10% 50V
C	66	NCB21HJ-151AY	C CAPACITOR	150PF 5% 50V
C	67	NCB21HJ-151AY	C CAPACITOR	150PF 5% 50V
C	68	NCB21HJ-101AY	C CAPACITOR	100PF 5% 50V
C	69	0EK41HM-225	E CAPACITOR	2.2MF 20% 50V
C	70	NCB21HK-392AY	C CAPACITOR	3900PF 10% 50V
C	71	0EK61HM-3352N	E CAPACITOR	3.3MF 20% 50V
C	72	NCB21HK-102AY	C CAPACITOR	1000PF 10% 50V
C	80	NCB21HJ-820AY	C CAPACITOR	82PF 5% 50V
C	81	NCB21HJ-470AY	C CAPACITOR	47PF 5% 50V

BLOCK NO. 04				
A	REF.	PARTS NO.	PARTS NAME	REMARKS
C	82	0EK41CM-106	E CAPACITOR	10MF 20% 16V
C	83	NCB21HK-473AY	C CAPACITOR	.047MF 10% 25V
C	84	0EK41HM-225	E CAPACITOR	2.2MF 20% 50V
C	85	NCB21HK-331AY	C CAPACITOR	330PF 10% 50V
C	86	NCB21HK-561	C CAPACITOR	560PF 10% 50V
C	89	NCB21HK-102AY	C CAPACITOR	1000PF 10% 50V
C	90	NCB21HK-103AY	C CAPACITOR	.010MF 10% 50V
C	91	NCB21HK-103AY	C CAPACITOR	.010MF 10% 50V
C	92	NCB21HK-103AY	C CAPACITOR	.010MF 10% 50V
C	93	NCB21HK-103AY	C CAPACITOR	.010MF 10% 50V
C	94	NCB21HK-102AY	C CAPACITOR	1000PF 10% 50V
CF	1	VCF2M3B-104	CERAMIC FILTER	FM IF
CF	2	VCF2S3B-102	C FILTER	FM IF
CF	3	VCF1722-1152	CERAMIC FILTER	
CF	4	CMU2-456B05	CERA LOCK	
CN	1	VMC0163-R10	CONNECTOR	
CN	2	VMC0163-R04	CONNECTOR	
D	1	1SS133	SI DIODE	FOR RDS
D	2	1SS133	SI DIODE	
D	3	1SS133	SI DIODE	
D	4	1SS133	SI DIODE	
IC	1	TA2057N	IC	
IC	2	LC72136N	IC	
IC	4	BU1922	IC	
J	1	EMB41YV-302K	ANT TERMINAL	AM/FM ANT
L	1	VQZ0098-102	COIL BLOCK	MW/LW RF/OSC
L	4	VQP0018-221	INDUCTOR	
L	5	VQP0018-101	INDUCTOR	
L	10	VQZ0069-002	TRAP COIL	114KHZ TRAP
L	11	VQP0018-2R7	INDUCTOR	
Q	1	2SC2668(C)	TRANSISTOR	
Q	2	D1A114YKA-X	TR. I.M.	
Q	3	KTC3199(GL)-T	TRANSISTOR	
Q	4	KTC3199(GL)-T	TRANSISTOR	
Q	6	D1A114YKA-X	TR. I.M.	
Q	7	2SA1037K(R)	TRANSISTOR	
Q	8	2SA1037K(R)	TRANSISTOR	
Q	14	2SA1037K(R)	TRANSISTOR	
R	1	NRSA02J-102NY	MG RESISTOR	1.0K 5% 1/10W
R	2	NRSA02J-820NY	MG RESISTOR	82 5% 1/10W
R	3	NRSA02J-560NY	MG RESISTOR	56 5% 1/10W
R	10	NRSA02J-152NY	MG RESISTOR	1.5K 5% 1/10W
R	12	NRSA02J-102NY	MG RESISTOR	1.0K 5% 1/10W
R	13	NRSA02J-104NY	MG RESISTOR	100K 5% 1/10W
R	15	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W
R	16	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W
R	20	NRSA02J-331NY	MG RESISTOR	330 5% 1/10W
R	21	NRSA02J-224NY	MG RESISTOR	220K 5% 1/10W
R	22	NRSA02J-331NY	MG RESISTOR	330 5% 1/10W
R	23	NRSA02J-100NY	MG RESISTOR	10 5% 1/10W
R	24	NRSA02J-271NY	MG RESISTOR	270 5% 1/10W
R	25	NRSA02J-473NY	MG RESISTOR	47K 5% 1/10W
R	26	NRSA02J-153NY	MG RESISTOR	15K 5% 1/10W
R	27	NRSA02J-223NY	MG RESISTOR	22K 5% 1/10W
R	29	NRSA02J-473NY	MG RESISTOR	47K 5% 1/10W

Reel Pulse Board

[illegible]

BLOCK NO. 04

REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
R 30	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
R 31	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
R 34	NRSA02J-333NY	MG RESISTOR	33K 5% 1/10W	
R 35	NRSA02J-333NY	MG RESISTOR	33K 5% 1/10W	
R 36	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
R 37	NRSA02J-472NY	MG RESISTOR	4.7K 5% 1/10W	
R 38	NRSA02J-392NY	MG RESISTOR	3.9K 5% 1/10W	
R 39	NRSA02J-392NY	MG RESISTOR	3.9K 5% 1/10W	
R 42	NRSA02J-102NY	MG RESISTOR	1.0K 5% 1/10W	
R 43	NRSA02J-102NY	MG RESISTOR	1.0K 5% 1/10W	
R 44	NRSA02J-102NY	MG RESISTOR	1.0K 5% 1/10W	
R 45	NRSA02J-102NY	MG RESISTOR	1.0K 5% 1/10W	
R 46	NRSA02J-473NY	MG RESISTOR	47K 5% 1/10W	
R 48	NRSA02J-102NY	MG RESISTOR	1.0K 5% 1/10W	
R 52	NRSA02J-472NY	MG RESISTOR	4.7K 5% 1/10W	
R 54	NRSA02J-472NY	MG RESISTOR	4.7K 5% 1/10W	
R 55	NRSA02J-182NY	MG RESISTOR	1.8K 5% 1/10W	
R 56	NRSA02J-332NY	MG RESISTOR	3.3K 5% 1/10W	
R 57	NRSA02J-102NY	MG RESISTOR	1.0K 5% 1/10W	
R 60	NRSA02J-102NY	MG RESISTOR	1.0K 5% 1/10W	
R 61	NRSA02J-102NY	MG RESISTOR	1.0K 5% 1/10W	
R 65	NRSA02J-222NY	MG RESISTOR	2.2K 5% 1/10W	
R 66	NRSA02J-222NY	MG RESISTOR	2.2K 5% 1/10W	
R 68	NRSA02J-223NY	MG RESISTOR	22K 5% 1/10W	
R 69	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
R 74	NRSA02J-332NY	MG RESISTOR	3.3K 5% 1/10W	
R 75	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
R 76	NRSA02J-102NY	MG RESISTOR	1.0K 5% 1/10W	
R 80	NRSA02J-222NY	MG RESISTOR	2.2K 5% 1/10W	
R 82	NRSA02J-102NY	MG RESISTOR	1.0K 5% 1/10W	
R 83	NRSA02J-102NY	MG RESISTOR	1.0K 5% 1/10W	
R 84	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
T 1	VQ7A21-113	IFT		
TU 1	GAU0034-001	FRONT END	FM TU	
X 1	VCX5044-001	CRYSTAL		
X 2	VCX5057-001	CRYSTAL		

Head Amplifier & Mechanism Control Board

BLOCK NO. 06				
REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
C 101	NCS21HJ-821AY	C CAPACITOR	820PF 5% 50V	
C 102	NCS21HJ-221AY	C CAPACITOR	220PF 5% 50V	
C 103	QEK40JM-227	E CAPACITOR	220MF 20% 6.3V	
C 104	NCB21HK-333AY	C CAPACITOR	-033MF 10% 50V	
C 105	NCB21HK-222AY	C CAPACITOR	2200PF 10% 50V	
C 106	QEK41CM-106	E CAPACITOR	10MF 20% 16V	
C 107	NCS21HJ-561AY	C CAPACITOR	560PF 5% 50V	
C 108	QEK41EM-475	E CAPACITOR	4.7MF 20% 25V	
C 109	QEK41EM-475	E CAPACITOR	4.7MF 20% 25V	
C 110	NCB21HK-682AY	C CAPACITOR	6800PF 10% 50V	
C 111	NCB21HK-122AY	C CAPACITOR	1200PF 10% 50V	
C 112	NCB21EK-683AY	C CAPACITOR	-068MF 10% 25V	
C 113	NCB21HK-222AY	C CAPACITOR	2200PF 10% 50V	
C 121	NCS21HJ-331AY	C CAPACITOR	330PF 5% 50V	
C 201	NCS21HJ-821AY	C CAPACITOR	820PF 5% 50V	
C 202	NCS21HJ-221AY	C CAPACITOR	220PF 5% 50V	
C 203	QEK40JM-227	E CAPACITOR	220MF 20% 6.3V	
C 204	NCB21HK-333AY	C CAPACITOR	-033MF 10% 50V	
C 205	NCB21HK-222AY	C CAPACITOR	2200PF 10% 50V	
C 206	QEK41CM-106	E CAPACITOR	10MF 20% 16V	
C 207	NCS21HJ-561AY	C CAPACITOR	560PF 5% 50V	
C 208	QEK41EM-475	E CAPACITOR	4.7MF 20% 25V	
C 209	QEK41EM-475	E CAPACITOR	4.7MF 20% 25V	
C 210	NCB21HK-682AY	C CAPACITOR	6800PF 10% 50V	
C 211	NCB21HK-122AY	C CAPACITOR	1200PF 10% 50V	
C 212	NCB21EK-683AY	C CAPACITOR	-068MF 10% 25V	
C 213	NCB21HK-222AY	C CAPACITOR	2200PF 10% 50V	
C 221	NCS21HJ-331AY	C CAPACITOR	330PF 5% 50V	
C 301	QEKFIAM-107ZN	E CAPACITOR	100MF 20% 10V	
C 302	NCB21HK-393AY	C CAPACITOR	-039MF 10% 50V	
C 303	QEK40JM-227	E CAPACITOR	220MF 20% 6.3V	
C 304	QEK41CM-226	E CAPACITOR	22MF 20% 16V	
C 305	QEK41CM-226	E CAPACITOR	22MF 20% 16V	
C 306	QEK41CM-476	E CAPACITOR	47MF 20% 16V	
C 307	NCB21HK-103AY	C CAPACITOR	-010MF 10% 50V	
C 308	NCB21HK-562AY	C CAPACITOR	5600PF 10% 50V	
C 309	NCB21HK-562AY	C CAPACITOR	5600PF 10% 50V	
C 310	NCB21HK-223AY	C CAPACITOR	-022MF 10% 50V	
C 311	NCB21HK-682AY	C CAPACITOR	6800PF 10% 50V	
C 313	QEKFIAM-107ZN	E CAPACITOR	100MF 20% 10V	
C 314	QC20205-155	ML.C.CAPACITOR	1.5MF	
C 315	QC20205-155	ML.C.CAPACITOR	1.5MF	
C 316	QFG32AJ-103ZN	PP CAPACITOR	-010MF 5% 100V	
C 318	NCB21HK-103AY	C CAPACITOR	-010MF 10% 50V	
C 319	QFG32AJ-821ZN	TF CAPACITOR	820PF 5% 100V	
C 321	NCB21HK-103AY	C CAPACITOR	-010MF 10% 50V	
C 322	QFG32AJ-152ZN	PP CAPACITOR	1500PF 5% 100V	
C 331	QEK41CM-476	E CAPACITOR	47MF 20% 16V	
C 351	QEK41CM-106	E CAPACITOR	SHORT TEST TAILS	
C 371	QEK41EM-475	E CAPACITOR	4.7MF 20% 25V	
C 374	QEKFIAM-107ZN	E CAPACITOR	MOTOR +B	
C 375	QEKFIAM-107ZN	E CAPACITOR	100MF 20% 10V	
C 376	NCB21HK-103AY	C CAPACITOR	-010MF 10% 50V	
CN 31	VMC0163-R06	CONNECTOR	PRI/HEAD	
CN 32	QGB2011M1-10	PWB CONECTOR	PRI/MECHA	

BLOCK NO. 06					SUFFIX
REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX	
CN 33	VMC0163-R09	CONNECTOR	PRI/MICON		
CN 34	VMC0163-R10	CONNECTOR	PRI/AMP		
D 301	MA152WA-TX	DIODE	SHORT TEST TAILS		
D 309	MA704A	S-K.DIODE			
D 375	MA3051(M)	ZENER DIODE			
FW 31	VWS304-06A13K	FLAT WIRE	HEAD SW		
IC 31	BA3126N	IC	PB&REC		
IC 32	AN7317	IC			
IC 33	BU4094BCF-X	IC			
L 301	QGR0620-001	OSC. COIL(BIAS)			
L 303	VQP0033-100Z	INDUCTOR			
Q 101	FA1A4ZX	TRANSISTOR	REC EQ CONT.		
Q 102	FA1A4ZX	TRANSISTOR			
Q 201	FA1A4ZX	TRANSISTOR			
Q 202	FA1A4ZX	TRANSISTOR	REC EQ CONT.		
Q 301	FN1L4M	TRANSISTOR	REC EQ CONT.		
Q 302	2SC2001(L,K)	TRANSISTOR			
Q 303	2SC2001(L,K)	TRANSISTOR			
Q 304	2SC2001(L,K)	TRANSISTOR			
Q 305	2SC2001(L,K)	TRANSISTOR			
Q 306	2SC1623(6)	TRANSISTOR			
Q 307	2SC1623(6)	TRANSISTOR			
Q 308	2SC1623(6)	TRANSISTOR			
Q 309	2SC1623(6)	TRANSISTOR			
Q 321	FA1L4M	TRANSISTOR			
Q 323	2SC1623(6)	TRANSISTOR	SHORT TEST TAILS		
Q 371	2SA952(L,K)	TRANSISTOR	MOTER+B		
Q 372	FA1F4MX	D. TRANSISTOR			
Q 375	2SB562(C)	TRANSISTOR	SOLENOID DRIVE		
Q 376	2SC1623(6)	TRANSISTOR			
R 101	NRSA02J-220NY	MG RESISTOR	22 5% 1/10W		
R 102	NRSA02J-182NY	MG RESISTOR	1.8K 5% 1/10W		
R 103	NRSA02J-242NYM	RESISTOR	2.4K 5% 1/10W		
R 104	NRSA02J-122NY	RESISTOR	1.2K 5% 1/10W		
R 105	NRSA02J-104NY	MG RESISTOR	100K 5% 1/10W		
R 106	NRSA02J-332NY	MG RESISTOR	3.3K 5% 1/10W		
R 107	NRSA02J-123NY	MG RESISTOR	12K 5% 1/10W		
R 108	NRSA02J-562NY	MG RESISTOR	5.6K 5% 1/10W		
R 109	NRSA02J-122NY	RESISTOR	1.2K 5% 1/10W		
R 110	NRSA02J-472NY	MG RESISTOR	4.7K 5% 1/10W		
R 111	NRSA02J-333NY	MG RESISTOR	33K 5% 1/10W		
R 112	NRSA02J-222NY	MG RESISTOR	2.2K 5% 1/10W		
R 113	NRSA02J-472NY	MG RESISTOR	4.7K 5% 1/10W		
R 114	NRSA02J-272NY	MG RESISTOR	2.7K 5% 1/10W		
R 116	NRSA02J-102NY	MG RESISTOR	1.0K 5% 1/10W		
R 121	NRSA02J-102NY	MG RESISTOR	1.0K 5% 1/10W		
R 201	NRSA02J-220NY	MG RESISTOR	22 5% 1/10W		
R 202	NRSA02J-182NY	MG RESISTOR	1.8K 5% 1/10W		
R 203	NRSA02J-242NYM	RESISTOR	2.4K 5% 1/10W		
R 204	NRSA02J-122NY	RESISTOR	1.2K 5% 1/10W		
R 205	NRSA02J-104NY	MG RESISTOR	100K 5% 1/10W		
R 206	NRSA02J-332NY	MG RESISTOR	3.3K 5% 1/10W		
R 207	NRSA02J-123NY	MG RESISTOR	12K 5% 1/10W		
R 208	NRSA02J-562NY	MG RESISTOR	5.6K 5% 1/10W		
R 209	NRSA02J-122NY	RESISTOR	1.2K 5% 1/10W		

BLOCK NO. 06

REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
R 210	NRSA02J-472NY	MG RESISTOR	4.7K 5% 1/10W	
R 211	NRSA02J-333NY	MG RESISTOR	33K 5% 1/10W	
R 212	NRSA02J-222NY	MG RESISTOR	2.2K 5% 1/10W	
R 213	NRSA02J-472NY	MG RESISTOR	4.7K 5% 1/10W	
R 214	NRSA02J-272NY	MG RESISTOR	2.7K 5% 1/10W	
R 216	NRSA02J-102NY	MG RESISTOR	1.0K 5% 1/10W	
R 221	NRSA02J-102NY	MG RESISTOR	1.0K 5% 1/10W	
R 301	NRS181J-221NY	MG RESISTOR	220 5% 1/8W	
R 303	NRSA02J-393NY	MG RESISTOR	39K 5% 1/10W	
R 304	NRS181J-101NY	MG RESISTOR	100 5% 1/8W	
R 305	NRSA02J-222NY	MG RESISTOR	2.2K 5% 1/10W	
R 306	NRSA02J-222NY	MG RESISTOR	2.2K 5% 1/10W	
R 310	NRS181J-560NY	MG RESISTOR	56 5% 1/8W	
R 311	NRS181J-560NY	MG RESISTOR	56 5% 1/8W	
R 313	NRSA02J-3R3NYM	RESISTOR	3.3 5% 1/10W	
R 314	NRSA02J-223NY	MG RESISTOR	22K 5% 1/10W	
R 315	NRSA02J-100NY	MG RESISTOR	10 5% 1/10W	
R 316	NRSA02J-223NY	MG RESISTOR	22K 5% 1/10W	
R 317	NRSA02J-100NY	MG RESISTOR	10 5% 1/10W	
R 319	NRSA02J-152NY	MG RESISTOR	1.5K 5% 1/10W	
R 322	NRSA02J-152NY	MG RESISTOR	1.5K 5% 1/10W	
R 327	NRSA02J-474NY	MG RESISTOR	470K 5% 1/10W	
R 332	NRSA02J-123NY	MG RESISTOR	12K 5% 1/10W	
R 333	NRSA02J-123NY	MG RESISTOR	12K 5% 1/10W	
R 335	NRSA02J-152NY	MG RESISTOR	1.5K 5% 1/10W	
R 336	NRSA02J-472NY	MG RESISTOR	4.7K 5% 1/10W	
R 337	NRSA02J-332NY	MG RESISTOR	3.3K 5% 1/10W	
R 338	NRSA02J-392NY	MG RESISTOR	3.9K 5% 1/10W	
R 339	NRSA02J-222NY	MG RESISTOR	2.2K 5% 1/10W	
R 340	NRS181J-391NY	MG RESISTOR	390 5% 1/8W	
R 341	NRSA02J-123NY	MG RESISTOR	12K 5% 1/10W	
R 342	NRSA02J-203NY	MG RESISTOR	20K 5% 1/10W	
R 343	NRSA02J-183NY	MG RESISTOR	18K 5% 1/10W	
R 351	NRSA02J-683NY	MG RESISTOR	SHORT TEST TAIS	
R 352	NRSA02J-912NY	RESISTOR	SHORT TEST TAIS	
R 371	NRSA02J-123NY	MG RESISTOR	12K 5% 1/10W	
R 372	NRSA02J-102NY	MG RESISTOR	1.0K 5% 1/10W	
R 375	NRSA02J-151NY	MG RESISTOR	150 5% 1/10W	
R 376	NRSA02J-472NY	MG RESISTOR	4.7K 5% 1/10W	
VR 31	QVPA603-503AZ	SEMI.V.RESISTOR	BIAS ADJ	
VR 32	QVPA603-503AZ	SEMI.V.RESISTOR	BIAS ADJ	
VR 37	QVPA603-103M	SEMI.V.RESISTOR	TAPE SPEED ADJ	

14. Packing

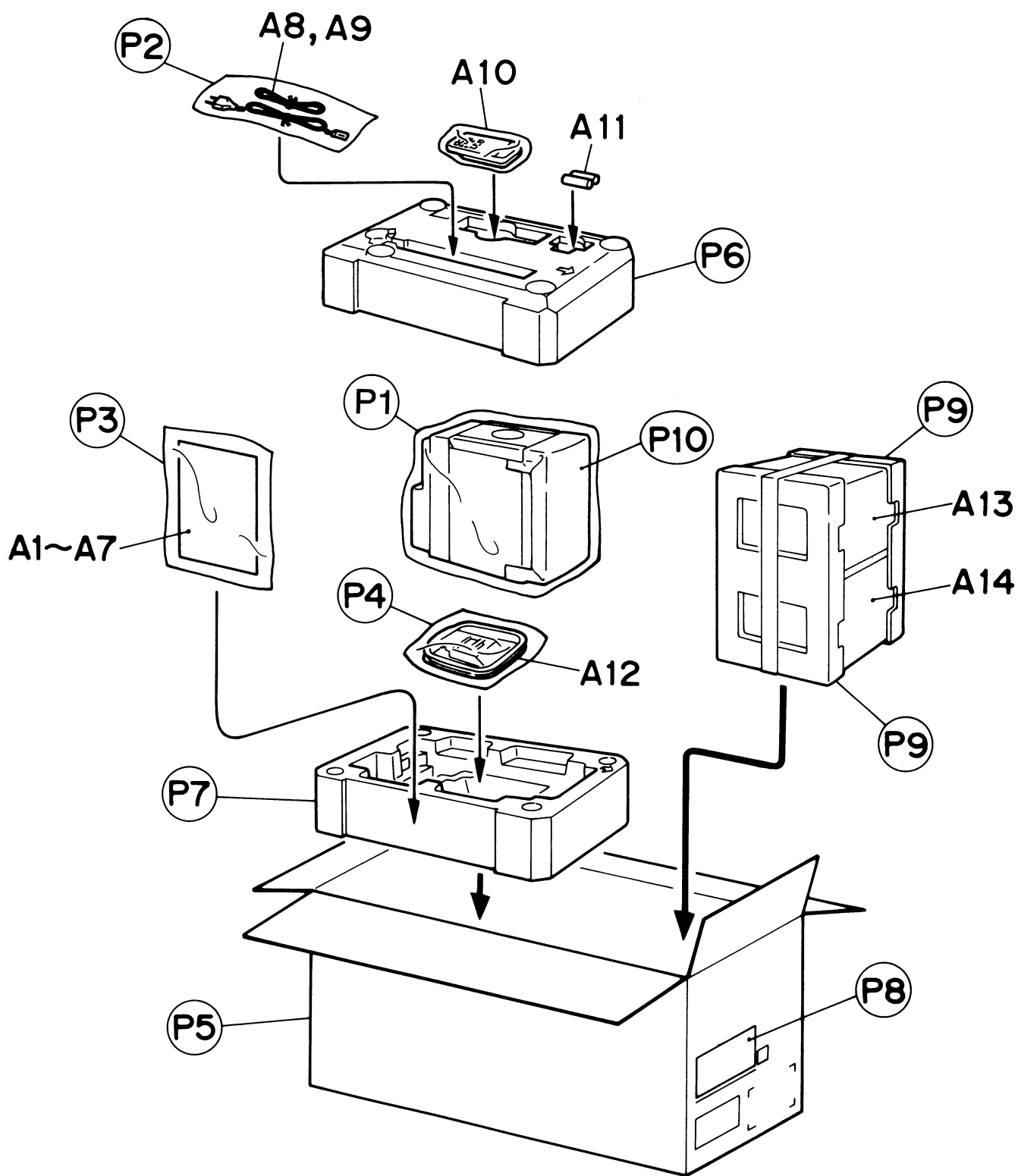


Fig. 14-1

Packing Parts List

BLOCK NO. M4MM

△	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY	SUFFIX	CLR
P	1	VPE3026-006	POLY BAG	FOR SET	1		
P	2	QPGA015-03503	POLY BAG		1	B	
		QPGA012-02505	POLY BAG	FOR P.CORD	1	E,EN,G	
P	3	VPE3026-004	POLY BAG	INSTRUCTIONS	1		
P	4	VPE3005-042	POLY BAG	FOR AM ANT.	1		
P	5	VPC9317-C001	CARTON		1		
P	6	VPH1709-001	CUSHION(UPPER)		1		
P	7	VPH1709-002	CUSHION(BOTTOM)		1		
P	8	VND3111-219	CARTON LABEL		1		
P	9	VGSP024-004	SIDE CUSHION		2		

Accessories

BLOCK NO. M5MM

△	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY	SUFFIX	CLR
A	1	VPK3001-012	SHEET		1		
A	2	VNN9317-271C	INSTRUCTIONS		1	EN	
		VNN9317-671C	INSTRUCTIONS		1	B	
		VNN9317-251C	INSTRUCTIONS		1	E,EN,G	
		VNN9317-261C	INSTRUCTIONS		1	E	
A	3	BT-54003-1	WARRANTY CARD		1	B	
		BT-54006-1	WARRANTY CARD		1	G	
A	4	BT-20066A	SVC CENTRE LIST		1	B	
A	5	E43486-340B	SAFETY SHEET		1		
A	7	VNC1200-107	CAUTION SHEET		1		
A	8	QMP39F0-183	POWER CORD		1	E,EN,G	
		QMP5520-183BS	POWER CORD		1	B	
A	9	EWP503-001	ANT.WIRE	FM ANT	1		
A	10	VGR0063-301	REMOCON UNIT	RM-RXUT100	1		
A	11	R6SPTT/2STA	BATTERY	FOR REMOCON	1		
A	12	EQB4001-015	AM LOOP ANT	AM ANT	1		
A	13	UXT100K-SPBOX	SPEAKER BOX		2	B,E	
		UXT100HK-SPBOX	SPEAKER BOX		2	EN,G	
SVP	1	VGSP024-002	SPEAKER NET		2		